From High School to Higher Education: Processes, Changes, and Ways to Succeed

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Processes, Changes, and Ways to Succeed

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A Thesis Submitted in Partial Fulfillment
of the Requirements for the
Degree of Doctor of Education

School of Education

University of Durham

2011

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ABSTRACT

Transition from high school to higher education brings many changes to students in their academic and social life. Institutions are keen to provide support and services to help students make a smooth transition to college in the hope of helping them to be successful in their education career. This thesis aims to investigate what the first-year students in two associate degree (AD) programmes in a university in Hong Kong expected from college education, what sorts of changes and problems they had encountered in the first year of college and how they perceived academic success. Evidence came primarily from a questionnaire survey of three hundred students, and twenty-four face-to-face individual interviews. The findings of the study reveal that many first-year students in the two AD programmes were not sufficiently prepared for college study. Some failed to integrate into the wider context of a new environment to reap the full benefits of tertiary education, while some failed to make sufficient changes in their learning approach to suit the new academic demands. College to them seemed to be an extension of secondary education preparing them for a full degree programme. On a positive note, the sample in this study agreed that they received more exposure to active learning, such as participating in project work and working in groups. They also began to note the importance of developing themselves in a more holistic manner and the need for developing transferable skills. Raising students' awareness of the differences between school and college prior to their arrival at college is considered to be an important endeavor to facilitate a smooth transition. Institutions' support for student adaptation should include not only early orientation programmes but also ongoing activities. A key to successful transition is to promote students' academic and social integration through policies such as outcome-based curriculums, learning communities and compulsory residence. Students should also be encouraged to undertake regular self-reflection on their learning so as to remain aware of where they are and what to do next.

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Acknowledgements

I would like to extend my sincere thanks to my supervisor, Professor Jim Ridgway for his advice and support all the way through the writing up of this thesis. I am most grateful to Dr Anthony Lee for his inspiration, guidance, and in particular his comments on the manuscript. Without the support and encouragement of my friends in the Ed.D course, I don’t think I would have had the stamina to pursue this thesis. To all of them my heartfelt thanks.

Declaration

I hereby declare that this thesis is entirely my own work and that it has not been submitted for a degree in any other university.

Chapter 1

The Problem Statement

1.1 Introduction

Expansion of participation in higher education raises the issues of increasing diversity in the student population, students' readiness for college level study, the need to change the approaches of teaching and to adjust the focus of the curriculum. These issues are closely related to the questions of how well students can adapt to the new demands and environment in college and what can be done to help them become more effective learners so that they can make the best of their college education. But very often in real life the problem of transition has not been properly attended to. McInnis (2001a) made a comment as follows:

> "We researchers have not, for example, asked students enough questions about the relative importance of what we have assumed is important in the process of transition from school to university. It might be asked if we are in danger of becoming overly concerned, if not precious, about aspects of the first year experience that are of little consequence to the students themselves." (p. 112)

On the part of students, the problem of transition may vary from inability in handling academic demands to confusion induced from searching for personal identity. Some may not be conscious enough about changes in the new environment and alert to the possible impact brought about by these changes. For those who find the new situation difficult to cope with, some may just let it be, continue in their own way and believe that things will become settled sooner and later. Not many of them would make the effort to check, clarify or reduce the gaps in their knowledge and understanding of the new environment and demands, while an even smaller number of students may take a step out to better manage the new expectations and demands on them. During the transition process from school to college, students are left to

sink or swim. This thesis aims to address the following questions in relation to student transition to college study:

1. What sorts of changes and problems do students encounter in the first year of college?
2. What are the key factors contributing to successful transition to college?
3. What do students expect of college education?
4. How do they perceive academic success?

1.2 The problem of adaptation

The problem of adaptation is complex. The most obvious challenges faced by students commencing college study are social changes and academic demands. In western countries, young people may go to another city or state in order to start college education and move into the student residence. They may need to manage the pains associated with the separation from family and high school friends for the first time and to adjust to a new form of social life in the student residence. The Hong Kong situation is different. At the time when this study was conducted, only a very small number of college students had the opportunity to stay in the student residence; now, however almost all universities in Hong Kong have in place a compulsory residential policy requiring undergraduate students to stay in the student residence for at least one year throughout their college education. However, this policy does not apply to associate degree students due to the availability of resources. Therefore, to the associate degree students, the biggest challenge for college attendance relates largely to the structure of the institutional environment and the demands of academic study.

1.2.1 A shift in locus of control

To many students, the college experience represents a marked contrast to their secondary school days. At school, institutional practices were explicitly communicated to them. They were given clear expectations of achievement e.g. to get a good public examination result and then to get a place in a desirable degree programme of a prestigious college. However, once they got into college, they suddenly found that the expectations of them were less clear. They had to strive in their own way to identify their new role. As young adults, they were expected to take considerably more responsibility for themselves and their actions, while these demands were lessened through the support of school and home when they were in secondary school. Secondly, the structural support in college is different. In secondary school, "class" is the basic unit, by which students are grouped. Each class is managed by a class teacher, who is usually the source of help and support. In college, the concept of "class" ceases to exist. There is no longer a class of students studying the same subjects and following the same timetable together. Each student has his/her own core and elective courses and they have to manage their college life as an individual rather than as a member of a group. They are expected to work autonomously and independently. In 1995, McInnis and James undertook a study entitled "*First Year on Campus: Diversity in the Initial Experiences of Australian Undergraduates"*. The core of this study was a student survey designed to examine the first year experience of undergraduates and the extent and impact of diversity in student backgrounds. Based on the responses comparing students' experiences at school and at university, it was found that 45% of the sample felt the standard of work required at university was much higher than what they had expected; 64% found that it was more demanding to study at university than at school; 36% found

that they had not been adequately prepared for university study in their final school year. Among all the issues of initial adaptation to college study, the most cited problem was about the management of one's own learning.

> "The problem in transition mentioned frequently by students was the abrupt shift to personal responsibility for managing their learning; as one student said 'At school you get looked after, teachers put pressure on you to do the work on time, here's up to you.'" (McInnis & James, 1995, p. 32)

In 1999, Childs and Spencer undertook a three-year project entitled *"Autonomy and the Ability to Learn"* to study the perceptions of Bachelors of Law (LLB) students of three universities in the United Kingdom about their learning experience. They used questionnaires and focus groups to explore factors that might be significant in assessing or hindering the transition to higher education. The students in the study indicated they were shocked by "the lack of class contact time and the amount of 'private study' required, even though they had expected a change in the approach to study" (Childs & Spencer, 2002, p. 5).

To assume independence in the learning process is one major concern of student transition. For those whose performance has been closely monitored and guided by teachers and parents in their secondary school years, the decline in attention at college can be an abrupt jolt and come as a great shock to them. Some of them may feel isolated and lonely as they have to find their own way to survive in the new environment since there is no one like their former teachers or fellow students to whom they can relate.

In Hong Kong, a general culture in primary and secondary education expects teachers to teach and students to be taught. Teachers are seen as authoritative figures who are the source of knowledge and should seldom be challenged. The role of students is to memorize what they are taught and to reproduce what they remember in examinations. Hong Kong students are therefore always criticized as

too examination-oriented, thus lacking the skills required to study on their own. When these students enter college, where more autonomy of learning is expected, they notice that a gap exists between their previous learning experience and the requirements expected for college level study. Since they have been too used to the spoon-feeding approach to learning, they find it difficult to take control of their studies in college. The shift in the perceived locus of control and responsibility causes a number of difficulties for many students, because their prior school experience has not sufficiently prepared them for such a shift in the learning process.

1.2.2 New mode of learning

Unlike secondary school education, college education expects students to be more pro-active and independent throughout the learning process. They are expected to take their own notes, search for information, undertake group projects, participate in class discussion, give oral presentations, etc. They also need to schedule their timetable and decide on their electives. To those students who have been brought up in a culture where emphasis is on teaching and examinations, these new demands will cause them serious problems if they have not been successful in formulating an independent approach to studying in their secondary school years. Childs and Spencer (2002) found in their study that the change in study approach in college caused six kinds of student concerns. These concerns were: “losing direction; not maintaining the motivation; not knowing if you are doing enough work generally or doing it as efficiently as possible; lack of confidence; not being able to take relevant and thorough enough notes which are useful for revision; and less time to ask questions and have them answered” (p. 6). In particular, they found that quite a number of students had difficulties in handling the workload.

> “Most students had anticipated that doing the degree would be hard work and there would be a heavy workload. But even so, many found it harder

> than they had anticipated or found that there was much more work than expected." (Childs & Spencer, 2002, pp. 4-5)

Workload is definitely an issue of concern. Many first-year students complain about being overwhelmed by a vast amount of work. As part of a larger project entitled *"Transition from Secondary to Tertiary: A Performance Study"* jointly undertaken by Monash University and University of Melbourne in 1998, McInnis and James found in their study on *"Adjustment and Transition for School Leavers"* that 56% of students who were dissatisfied with their initial university experiences considered that the volume of work posed a problem for their learning. They made a comment as follows:

> "Managing the workload is a key contributor to a satisfactory transition, and not coping with the workload can influence decisions to leave university. Contrary to the view that students would instinctively complain about their workload, our experience suggests that students make considered judgments in their responses, and that student perceptions of workload effectively discriminate between some important categories of students." (McInnis & James, 1998, p. 16)

Such a situation is made worse with the change from elite to mass higher education. Widening access to college education brings in more students who appear to be insufficiently prepared in order to expand their knowledge base and experience new challenges.

1.2.3 Readiness/Preparedness for college study

Clerehan and Walker (2003) conducted a research project at Monash University to study how first-year students perceived their readiness for university-level assignment writing in the discipline of Marketing. Students were asked to respond to questions on the following themes:

- how well they understood what they were required to do to successfully complete their major assignment;
- how easy or hard it was to research and write the assignment;

- what sources of help they consulted and which were the most helpful and;
- the extent to which the writing requirements in their final year of high school prepared them for writing the Marketing assignment (Clerehan & Walker, 2003, pp. 40-41).

The results indicated that almost half (44.5%) of the respondents did not think their writing experience in Year 12 had adequately prepared them for the university-level writing assignment. Most importantly, they found that some students "appear reluctant to take the initiative when they face problems with assignments" (p. 44).

McInnis and James' study (*op. cit.)* had a similar finding.

> "The perception of the appropriateness of the final year of school as a preparation for university was generally negative. Only 38 per cent of the satisfied students agreed they were prepared, and the dissatisfied students were even more negative, only 23 per cent being in agreement. Similarly, the dissatisfied students were far more negative than the satisfied students in their view of the extent to which their first year subjects built on their study at school (50 per cent cf. 35 per cent)." (McInnis & James, 1998, p. 12)

1.2.4 Mismatched expectations

College year is a critical time for personal growth. It is a time when students grow from adolescent to adulthood. Some students may face psychological problems such as confusion about self, searching for identity, etc. Some students may suffer from a sense of failure if they fail to enter their preferred college programme that they have most interest in.

A mismatch between expectations and actual experiences very often leads to psychological discomfort. There are studies which confirm the occurrence of the freshman myth or the matriculant myth, which refers to the phenomenon that a student's initial expectations of college are often higher than their subsequent experience of the reality of college life. Quite a number of students overestimate

their ability to adjust to college and these students tend to become more disenchanted and more vulnerable to dropping out. Gerdes and Mallinckrodt (1994) conducted a longitudinal study of retention. They found in their study that many students overestimated their ability to adjust academically and socially to college but underestimated their ability to make a personal/emotional adjustment (pp. 282-283).

Many students start college with a vague idea of what their programme of study is all about. Those who have inadequate information about the programme they are doing are more likely to experience difficulties in adjusting to college teaching style and in fulfilling the academic demands. They may also be more critical of the quality of teaching and less dissatisfied with their overall college life. McInnis and James (1998) commented that:

> "the most telling indicator of the positive or negative initial academic adjustment was the extent to which the students had a clear idea of where their course was going." (p. 13)

Noting that some of its students in computer degree programmes have misconceptions about studying computing at tertiary level, the Faculty of Information Technology of the Monash University started up a "Smart House" project in 1999. The project aimed to tackle the transition problems by helping secondary school students make informed choices about their study programme in university and prepare them for a successful transition to university study (Shread, Lowe, Nicholson & Ceddia, 2003). The project took the form of a five-day residential camp during the summer holidays, targeting students who were about to enter the final two years of their secondary education. Participants were engaged in a project to set up a computer controlled "smart house". By taking part in the project, the participants would get an overview of options available for university-level computing courses as well as an understanding of computing course content. More

importantly, the participants would be given a learning experience in a college environment and many opportunities to interact with university teaching staff and current students. The impact of the programme was measured by two follow-up studies. The benefits of tackling the transition issues before students arrive at university were confirmed.

Helping secondary school students to obtain a realistic insight into the type of study style and content they could expect to find in a tertiary environment as well as to make more informed choices on the degree programme to study seem to be effective strategies for supporting successful transition to college.

1.2.5 Interface between high school and college

In fact, not only students but also university teachers have little understanding of how learning and teaching are structured in each other's sector. Booth (1997) undertook a study at the University of Nottingham to examine the student perspective at the point of entry to a history degree programme in order to help university tutors understand more fully their students' interest in, and rationale for, studying history, views on effective teaching and learning, preparedness and motivation. One school teacher in the study pointed out that university staff often appeared to have little idea of the skills that their students possessed. Students were frequently regarded as an undifferentiated mass and were discussed in highly stereotyped ways in terms of the perceived presence or absence of intelligence and industry. He further elaborated that:

> "a mutual lack of comprehension between university history faculty and school teachers of history about developments in each other's sector. This isolationism threatens student enthusiasm and motivation, and constitutes a key structural obstacle to the smooth transition to university as well as to the wider development of the discipline." (Booth, 1997, p. 10)

With the funding support from the Scottish Office Education Department, a study to examine the experience of students leaving school and entering higher education was conducted in the period between October 1988 and November 1990. It was found in the study that the staff members in tertiary sectors were rather poorly informed of the syllabuses and teaching methods in schools. Students complained that their teachers had made wrong assumptions about their prior knowledge of the subject and taught at a pace too fast for them, while the teachers found it difficult to pitch the course at the right level as they "felt rather out of touch with what was happening in schools" (Entwistle, Wall, Macaulay, Tait & Entwistle, 1991, p. 12).

It is supported by researchers that institutions should play a more active role in facilitating students' adaptation to the new environment. The following are two suggestions which are worth pursuing further:

> "for many students – and certainly particular sub-groups – the academic dimension of the experience of transition to university academic requirements can be improved by the provision of targeted programs." (Clerehan &Walker, 2003, p. 37)

> "During transition, more could be achieved by a revitalized and extensive orientation, individual mentors, and efforts to facilitate establishing new networks." (Pargetter, 1995, p. 4)

It is in fact very common for institutions to offer different kinds of support programmes to facilitate student transition, but they generally see their role in the transition process as interventionists. Students are encouraged to identify their weaknesses and seek assistance or remediation from the student services, such as to receive skills training in areas where they experience learning difficulties, or to take part in the academic support schemes available. However, anecdotal comments suggest that such types of programmes very often attract students who are least likely to need assistance, whereas those students needing help rarely make use of the opportunity.

1.3 The Hong Kong situation

Hong Kong's higher education system has undergone a period of dramatic expansion in the past two decades. In 1989/1990, less than 9% of the relevant age group was able to receive higher education. In 1989, the government decided to expand the tertiary sector substantially. It set an ambitious pace of development with the aim of doubling the number of first-year first-degree places by 1994/1995.

By the end of the nineties, 30% of the 17–20 age group were pursuing higher education with 17% studying in the eight government-funded universities; 11% were studying in subsidized sub-degree programmes and 2% were studying overseas. As compared with the figures of 1990 (10%) and 1980 (2.5%), a further 20% of the 17–20 age group received higher education. A more ambitious goal was set in the policy speech made by the then Chief Executive of the Hong Kong Special Administrative Region (HKSAR) in 2000. In view of the demand for a more highly qualified workforce and the loss of graduates through emigration during the pre-1997 period of political uncertainty, he set a policy objective to build a flexible higher education system with multiple channels and modes of learning, and that by 2012 60% of senior secondary school leavers of the 17–20 age group would be able to receive full-time tertiary education. To achieve this target, the first batch of Associate Degree (AD) programmes was launched in 2000. The target students of AD programmes are secondary school leavers who have completed Advanced-level study but have not met the entry requirements for a full degree programme. The AD programmes offer these students an opportunity to obtain a recognized terminal qualification by which to enter the work force and also an alternative route to higher education by slotting into the second year of a 3-year degree programme. While the access to higher education is wider, it is also likely that more students who appear to

be not so academically prepared for college study will be admitted to higher education.

In western countries the attrition rate is very often quite high. In his presentation at the 11th Annual Conference of the European Access Network, Tinto (2002) made the following statement:

> "In the United States, slightly more than half of all students (51 percent) who begin university study complete their degree in their initial institution within six years. Though some students eventually earn their degrees via transfer to another university or college, it remains a fact that for many institutions in the United States dropout is often as frequent as graduation." (p. 1)

He further elaborated that, although the graduation rate in some elite private universities such as Harvard and Princeton, and several very selective public universities such as the University of Michigan and the University of Virginia, may be up to 80% to 90%, many open-enrollment universities graduate less than 30% of their students. That is why many studies were conducted to look at the reasons for attrition and to explore strategies for retention. The attrition rate in Australian universities is also becoming high. It was found in a recent study of 12 universities that the average attrition rate was 17%, with the lowest being 9.7% and the highest being 24.2% (Hare, 2010).

The Hong Kong situation is quite different. The college attrition rate is generally very low, almost close to zero percent. Very few Hong Kong college students quit their study. Once they are admitted to a college programme, they all have a firm resolution to complete it and to obtain a degree, although their level of commitment to study may be problematic. Some students may merely look for a qualification and lack the dedication and the motivation to work to their best. In response to the government policy of expanding higher education, more and more publicly-funded and private providers take part in the provision of AD programmes.

On the one hand, the quality of these programmes is a serious concern. On the other hand, the issues of transition should never be underestimated as it is very likely that the AD students may need more support during their transition to college. The consequences of a difficult transition can be serious to individual students. An inability to cope with their studies may lead to a loss of confidence, increased stress, ongoing academic and social difficulties, thus leading to eventual failure or withdrawal from college.

Overseas research on transition has been extensive and varied, generally focusing on specific aspects of transition, persistence and academic performance in particular contexts. It is possible to identify some common themes and factors about issues of transition. However, considering the possibility of variations in findings as caused by different cultures, investigators of related research tend to agree that, while transition problems and the means of overcoming them can be studied to some extent at a general level, there may well be issues specific to a student category, a discipline or an institution. Considering that knowledge about issues relating to the school to college transition in Hong Kong is rather minimal as this topic has seldom been studied systematically, this thesis sets out to understand the issues of transiting from high school to higher education, as well as to identify factors which may facilitate academic success.

1.4 Subjects of the study

This study focuses on the transition issues faced by associate degree students in their first year of college. This target group is of interest for three main reasons. First, the principal source of associate degree programmes intake is school leavers who fail to gain admission to full degree programmes but who expect to

articulate to one with their associate degree qualification. Associate degree students are seen as less academically strong than their counterparts in degree programmes and they often are. They are likely to need more support, especially in terms of basic academic skills such as writing academic papers, taking notes, making oral presentations, and joining class discussions.

Second, associate degree programmes may be regarded as a remedial type of pre-university study. Such a view may have a negative impact on students' self-image, which will induce more difficulties in their adaptation to tertiary education, especially on psychological grounds. How do associate degree students view themselves? Do they have a problem of self-concept, i.e. beyond success? Does their sense of inferiority have any negative impact on their academic performance?

Third, the duration of an associate degree programme is one year shorter than a degree programme. That means students have a shorter period of time in which to become accustomed to the new environment. There is, therefore, a pressing need to facilitate their adaptation. Whether students' adaptation can be expedited, and whether an associate degree programme can help students build a solid foundation for academic work on a full degree programme, are key factors to the success of an associate degree programme.

1.5 Objectives of the study

The investigator of this study was working in the university featured in this study as a co-coordinator of institutional surveys. Her main responsibility was to manage the collection and analyses of student feedback data. She had access to some parts of student data, such as demographic details and contact information.

This study was initiated in 2002. Three years before the study started, the university featured in this study kicked off a new institute-wide project aimed at understanding first-year student experiences, with the ultimate objective of planning improvements for their educational experiences with reference to their expectations and experiences in the first semester. The coverage of the institute-wide survey was very broad, ranging from personal development to university facilities and services. It was planned that the survey would be undertaken on an annual basis, thus providing a longitudinal perspective on the student experience.

The investigator of this study was particularly concerned with AD students' learning experiences, taking into account the fact that they were a new type of student body in higher education because AD programmes were introduced just two years before this study was initiated. She also assumed that AD students would demand a higher level of academic support in college study because their academic ability might be weaker when compared with their degree counterparts. The investigator thus decided to undertake an independent study with the focus on the key transition issues that AD students might face in their first year of higher education.

This study has several objectives to meet. First, it aims to understand the general transition problems faced by college students through an investigation of associate degree students in their adaptation to the college environment. While associate degree students are seen as less competent academically, what sorts of adaptation problems do they face in the first year of college? Are they aware of the issues of adaptation? What problems do they encounter in fulfilling the academic demands? What are the barriers to their learning? Are they impeded by their language ability? How do they cope with the academic demands? Do they make any

changes in their learning approaches? Are they used to the teaching methods in college? Do they have any self-concept problems associated with their relatively poor performance in public examinations? What strategies do they adopt in order to cope with the academic and personal demands of college, as well as the social changes?

The second objective is to gain a better understanding of the motives, values and expectations of this group of students. What are their goals of study? What do they expect to achieve in their course of study? What sort of changes have they undergone in terms of conceptions and methods of learning, development of soft skills, etc? How do they evaluate their gains/achievements/success? How do they define success in their education career?

Finally, this study intends to explore also the measures an institution can take to ease the transition process of the associate degree students and to explore the major predictors of successful adaptation to college study.

In this study, “secondary school” and “high school” are used as interchangeable terms to represent the same type of educational institution, as are “college” and “university”.

1.6 Significance of the study

Firstly this study aims to enhance an understanding of the nature and the extent of school to college transition problems and to identify the important elements in the transition process from school to college. With a wider range of data on specific student experiences of transition, tertiary institutions will be in a better position to make confident predictions about transition issues and to develop more effective strategies by which to address them.

Secondly it aims to add to the understanding of needs and concerns of associate degree students. With a better understanding of the learning experience of this specific student group in high school and their needs for successful transition to college, the college educators will be in a better position to make more informed choices about the skills and attributes required by students in order to be successful for their particular discipline and to distinguish how those requirements differ from the characteristics of the new students.

Thirdly, this study aims to expand the repertoire of strategies which are deemed to be useful in supporting students and in monitoring their progress in their first year of college.

Chapter 2

Literature Review

2.1 Studies about university students

There are two major groups of studies carried out on college students. One puts the focus on the broad development of students, considering that college is the time when they move from adolescence to adulthood. Another type looks at how students interact with the institutional environment and in what ways institutions can facilitate student growth and development. The former focuses on the examination of developmental and psychological changes within students. Most studies of this kind are derived from the field of psychology. One good example is the work done by William Perry in the seventies. Perry (1970, 1981) theorized that intellectual development of college students involves four major stages: dualism, multiplicity, relativism and commitment to relativism. At the dualism stage, students believe there are right and wrong answers. Teachers should tell them the right solutions and they can learn through taking notes, memorizing facts and then reproducing the right answers in examinations. They resist thinking independently, stating their own opinions, debating with others or drawing their own conclusions. When students move to the multiplicity stage, they start to understand there are multiple perspectives to a problem. Knowledge is an opinion. Students and teachers are equally entitled to believe in their own opinions. Students at this stage are not yet able to evaluate opinions adequately. At the relativism stage, students recognize that opinions are based on values, experiences, and knowledge. Solutions are contextual and relative. Knowledge is constructed through experience and reflection. Their teachers may have better-informed opinions in their areas of expertise and they are

the resource persons who can teach them how to develop, evaluate and defend opinions. At the commitment to relativism stage, students recognize some solutions are better than others because they are well supported with evidence and other factors. They learn to accept responsibility for constructing knowledge in a pluralistic world. Perry's scheme is intended to be descriptive rather than prescriptive of students' intellectual development. It provides a useful framework for analyzing one's reasoning development. Much insight can be gleaned from Perry's scheme in addressing diversity in classrooms. Studies in a similar vein focus on the nature and outcomes of student development, and attention has been given to the construction of various kinds of instrumentation for measuring student development. Consistent evidence found in this type of study shows that students did change and grow during the college years. Pascarella and Terenzini (1991, 2005) published a synthesis of more than 2600 studies about the impact of college on student development in terms of cognitive skills and intellectual growth, attitudes and values, and moral development in 1991 and provided an update in 2005. They concluded in their 1991 synthesis that students did improve their oral and written communication skills, abstract reasoning and critical thinking, and intellectual flexibility to deal with complex issues during the college years. They also found evidence indicating that students changed their value and attitudinal positions in areas of culture and aesthetics, education and occupation, socio-politics, gender roles and religion. They reaffirmed this conclusion in their 2005 update and claimed that consistent cognitive, attitudinal, value, and psychosocial changes occurred among college students over the past 50 years (Pascarella & Terenzini, 2005, p. 577). In a survey of 247 students at a mid-sized public university in the Southeast, students were found progressing in the areas of developing purpose, mature relationships, academic autonomy, and

tolerance from their first year to their final year at college (Foubert, Nixon, Sission & Barnes, 2005). These studies suggest that college years are a time of student growth and development. Therefore, institutions have a primary responsibility to design a more effective environment to facilitate student growth and development in a holistic manner.

Another area of work focuses on students' college experience. This type of study focuses on the initial experience of students in their first year of college, with the particular aims to investigate in what way the university may influence student change and development and how an institution may facilitate student success. This type of study is very common in the United States, the United Kingdom and also Australia. In the United States, most studies of this kind were developed from investigations of retention and attrition issues. One good example is the work carried out by Vincent Tinto. Tinto (1975, 1986 and 1993) synthesized much research relating to dropout from higher education in the mid-seventies and theorized that dropout from college is an outcome of the interaction between the individual and the institution. College students are more likely to drop out from college if they are insufficiently integrated into the academic and social systems of the institution. Building on the foundation of Tinto's work, some researchers put the focus of research onto students' total experience in college, studying how students react to the institutional environment academically, socially, and psychologically, and how institutions may add value to student learning and personal development. Under this paradigm, the Cooperative Institutional Research Program (CIRP) initiated by Alexandra Astin in 1966 and the National Survey of Student Engagement (NSSE) introduced by George Kuh in 2000 are two notable programmes that study student experiences at university.

Alexandra Astin's Cooperative Institutional Research Program (CIRP) was introduced in the Higher Education Research Institute at the University of California in 1966. It is one of the national studies, having the longest history and the largest sample. Astin adopts a longitudinal methodology which examines how students change during and after college, thus providing an indicator of the college effectiveness in facilitating student growth and learning. CIRP conducts a Freshman Survey (http://www.heri.ucla.edu/cirpoverview.php) designed to collect baseline data of incoming first-year students on a wide range of student characteristics such as parental income and education, ethnicity, and other demographic items; financial aid; secondary school achievement and activities; educational and career plans; and values, attitudes, beliefs, and self-concept. The data are intended for users such as researchers and university administrators to examine students' readiness for college; students' choice of colleges; student values and beliefs about diversity and civic engagement; and student expectations. In 2000, CIRP introduced the Your First College Year (YFCY) Survey (http://www.heri.ucla.edu/yfcyoverview.php) as a follow-up study to the Freshman Survey with the aim of collecting information on a wide range of cognitive and affective measures, and providing comprehensive institutional and comparative data for analyses of persistence, adjustment, academic and personal development of first-year college students and other first-year outcomes.

The National Survey of Student Engagement (NSSE) (http://nsse.iub.edu/) has been conducted by George Kuh in Indiana University Bloomington since 2000. Unlike CIRP, which is longitudinal in nature, NSSE provides a snapshot of student participation in institutional programmes and activities designed to facilitate their learning and personal development on an annual basis. The results provide an estimate of how college students spend their time and what they gain from attending

college. NSSE has created five clusters or benchmarks to evaluate the quality of student experiences, and to determine the effectiveness of educational practices adopted by the institution. The five benchmarks are *level of academic challenge, active and collaborative learning, student-faculty interaction, enriching educational experiences*, and *supportive campus environment.* These five benchmarks cover not only in-class learning but also out-of-class activities, thus embracing students' total experience in college education. NSSE is quite popular in the United States. In 2010, 603 institutions participated in NSSE involving 363,859 students. One important aspect of NSSE is to provide benchmarks to assess institutional effectiveness in terms of facilitating student success.

Similar initiatives have been carried out in the United Kingdom (e.g. Harvey, Geall, Moon, Plimmer, Drackett & King, 1997). Harvey and his colleagues developed the Student Satisfaction Approach to obtain, analyze and report students' views of their total university experience at the University of Central England. The primary aim of this approach is to collect and analyze evidence-based data to effect change and improvement at the institutional level. Unlike CIRP and NSSE, which administer a standard questionnaire, Harvey et al. adopted an evolving methodology to develop the questionnaire for their target respondents; therefore, the survey per se is flexible enough to address the pressing concerns of students. At the beginning of each survey cycle, consultations are made with students who determine the questions on the basis of feedback from focus-group sessions, telephone interviews, and from comments provided on the previous year's questionnaires. The questionnaire items are derived from areas of concern as suggested by the students. Each item of the questionnaire has two scales. One scale is to examine student satisfaction with aspects of interests identified, while the other scale is to measure the degree of

importance that students attach to each item according to their needs. The purpose of including the importance rating is to provide indications on what students on a programme consider to be important to their learning experience so as to identify where effort to maximize improvement should be focused. The statistical data collected through the survey are mapped on a satisfaction and importance grid. Those areas falling into the sectors of high importance to students but low satisfaction are the priority areas where the institution should intervene. A central feature of the report is the composite rating tables and trend graphs accompanied by a commentary, which are developed for the identification of main issues of concern. Although the survey is based on student-determined questions, which may change every year, longitudinal monitoring of student responses is possible because many issues recur over time. The core part of the process is the action and feedback cycle, which identifies responsibility for action and subsequent follow-up action. The action outcomes are to be reported back to the originators of the data, i.e. the students (Harvey, 2003, p. 8).

In Australia, the Course Experience Questionnaire (CEQ) has been used as part of a national survey of all university graduates of coursework programmes in Australian universities to ask about students' perceptions of the quality of their courses and also about the development of generic skills annually by the Graduate Careers Council of Australia (GCCA). The CEQ was originally carried out at Lancaster University in the eighties and further developed by Paul Ramsden as a performance indicator of teaching effectiveness at tertiary level. It is based on a theory of university teaching and learning in which students' perceptions of the curriculum, instruction and assessment will directly affect their approaches to learning and the quality of their learning outcomes (Wilson, Lizzio & Ramsden,

1997). The CEQ comprises four learning experience scales, one generic skills scale and one overall satisfaction item. The four learning experience scales include *good teaching, clear goals, appropriate workload* and *appropriate assessment*. These are the areas in which students have direct experience. The rationale of CEQ is based on Ramsden's research into student learning at university. The crux of Ramsden's findings is that students who perceive their learning environment positively in terms of these scales are more likely to take a deep approach to studying and to learn more effectively, whereas students who perceive their environment negatively are more likely to adopt superficial study methods. Some items within the scales are based on Ramsden's early instruments including the Course Perceptions Questionnaire and School Experiences Questionnaire, and also Entwistle's Experiences of Studying and Higher Education Questionnaire. Some other items are drawn from the statements made by students in the interviews about their experience of their study programme. Statements found to be strongly connected with the effectiveness of student learning are selected for the questionnaire (Wilson et al., 1997). The generic skills scale covers a range of transferable skills and abilities such as problem solving, effective communication, teamwork, innovations, etc. These skills are regarded as generic to workplace competence and would help students apply their subject knowledge and skills in the work environment more effectively. To include the generic skills scale is a response to an increasing awareness and acceptance that these skills are as important as subject expertise, and university graduates are expected to demonstrate abilities of that kind. The CEQ in its original form comprises 25 items with one overall item indicating graduates' overall satisfaction with their course. The CEQ result provides an indicator of student satisfaction with their overall course experience for comparative purposes.

In response to growing concerns that CEQ should cover broader dimensions of student experience in university, an extended CEQ was developed in 2001. The extended CEQ includes five new scales, namely *student support, learning resources, learning community, intellectual motivation,* and *graduate qualities.* Together with the original 25 items, the extended CEQ has 50 items covering a wide range of student experiences (McInnis, Griffin, James & Coates, 2001).

All these evaluation schemes, although they differ in their methodologies, instruments, functions and purposes, share one common characteristic, i.e. to use the quality of students' college experience as an indicator to demonstrate the effectiveness of an institution in terms of supporting student growth.

2.2 Transition and adaptation

School leavers go through a process of transition and adaptation in a new learning environment from leaving secondary school to entering university. In the Longman English-Chinese Dictionary of Contemporary English (1988), "transition" refers to the process in which something changes from one state to another. "Transition" is different from "change". Change is external and visible, while transition is internal and less visible. Transition is the process that one goes through mentally when one faces a big life change. Very often the transition process from high school to higher education is supposed to be gone through by default; in fact, such a process is often associated with stress, anxiety, and tension and, in many cases, can lead to students failing or withdrawing from university. Undoubtedly there are students who find ways to make this transition constructively and adapt to the university life smoothly, but there are others who feel overwhelmed and are not able to effectively meet the demands of their new roles. For example, it was found in a

survey conducted in Queensland University of Technology with 1524 first-year students that 608 students (40%) were classified as “at risk” using the criterion of not submitting or failing their first assignment (Nelson, Duncan & Clarke, 2009). It was also found in the fourth national study of students’ first year experience in Australia that 23% of the respondents seriously thought of deferring or discontinuing (James, Krause & Jennings, 2010).

“To adapt” means “to change so as to be or make suitable for new needs, different conditions, etc.” (Longman English-Chinese Dictionary of Contemporary English, 1988). If a person adapts to a new situation or adapts himself/herself to it, he/she makes changes in order to be able to deal with it successfully, especially by altering his/her ideas or habits. The meaning of “adjustment” and “adaptation” is very similar. If a person adjusts to a new situation or adjusts himself/herself to it, he/she gets used to it, especially by changing his/her behavior or his/her ideas. In the current study, college student adjustment or adaptation is defined as an individual student’s ability to cope with the demands of college study. This adaptation is multidimensional and includes areas of academic development, social skills and relationships, personal and emotional adjustments as well as attachment to the institution. College student adjustment and college student adaptation are considered as synonymous terms throughout the literature and will also serve as interchangeable terms in the present study.

2.3 Baker and Siryk’s model of adaptation

Based on the assumption that student adjustment to college is multifaceted, Baker and Siryk (1989) proposed a model to measure student adjustments to college in four dimensions. Each of these dimensions focuses on a major aspect of a

student’s college career. Baker and Siryk considered that adjustment to college involves varying demands and requires a variety of coping skills for adjustments, which may have varying degrees of effectiveness. They developed a self-report questionnaire, the *Student Adaptation to College Questionnaire (SACQ),* which is intended to be a diagnostic tool to identify students who are at risk in adapting to a new academic environment. SACQ contains 67 items divided into four scales, namely academic adjustment, social adjustment, personal-emotional adjustment, and institutional attachment. The coverage of each adjustment scale is described in the following sections.

2.3.1 Academic adjustment

Academic adjustment measures a student's success in coping with various educational demands of college study. Baker and Siryk’s definition of academic adjustment is very broad, involving more than the scholarly potential of a student. It encompasses four sub-scales including motivation to learn, actions taken to meet academic demands, academic performance and general satisfaction with the academic environment. The *motivation scale* measures students’ attitudes towards academic goals and the academic work required; their motivation for college attendance and for undertaking academic work; and also their sense of educational purpose. The *application scale* is designed to see how well students’ motivation is translated into actual academic effort; how successful they are in applying themselves to academic work; and meeting academic demands. The *performance scale* refers to students’ academic performance in various aspects. The *academic environment scale* measures students’ satisfaction with the academic environment and what it offers.

2.3.2 Social adjustment

The social adjustment scale focuses on a student's success in coping with the interpersonal-societal demands inherent in adjustment to college. It has four sub-scales. The *general scale* measures students' extent and success of participation in social activities on campus. The *other people* scale measures students' involvement and relationships with other people in college. The *nostalgia scale* assesses how well students deal with social relocation and being away from home and significant persons there. The *social environment* scale measures whether students are satisfied with the social aspects of the college environment.

2.3.3 Personal-emotional adjustment

The personal-emotional adjustment focuses on a student's intra psychic state during his or her adjustment to college, and the degree to which he or she is experiencing general psychological distress and/or any associated concomitant somatic problems. It may be manifested as global psychological stress, somatic distress, anxiety, low self-esteem or depression. It is divided into the *psychological* and the *physical scales.*

2.3.4 Institutional attachment

The institutional attachment scale explores students' feelings about being "in college", i.e. the quality of relationship between the institution and the student. Baker and Siryk also called this scale "the Goal commitment scale" as it measures a student's degree of commitment to educational goals of the institution and degree of attachment to the institution that the student is attending. It consists of two sub-scales. The *general scale* measures students' degree of satisfaction with being in college. The *college scale* measures students' feelings about, and satisfaction with, attending the particular institution at which they are currently enrolled.

2.3.5 Overall adjustment

The intention of Baker and Siryk's model is to identify those students who may have problems in adapting to college life so that early intervention can be planned to support the students. Therefore based on the sum of scores for all 67 items, an index of overall adjustment is generated. A higher index score indicates a better adjustment to college. This overall index score is intended to be an indicator to identify students at risk at the first instance of their college life. Proper intervention should then be given to rectify the situation.

Baker and Siryk contended that student adaptation to college involved four different dimensions, but they did not discuss further whether these four dimensions had the same level of importance or whether any one of them would be more important than the others in determining successful transition to college. The SACQ has been adopted for many studies to measure students' adaptation to college study, but there is no consensus on which dimension appears to be the most dominant in affecting student adaptation. College adaptation seems to be subject to differences among individual students and their college contexts.

2.4 Factors affecting students' perceptions of transition experience

As part of a national study entitled *"Transition from Secondary to Tertiary: A Performance Study"* in Australia, Evans and Peel (1998) undertook a fine-grained analysis of data collected from focus groups, questionnaires and student data files to identify the range and the nature of student groups who may be at risk of encountering transition problems and to identify factors contributing to successful transition. In their study on *"Factors and Problems in School to University*

Transition", they identified four factors which may affect students' perceptions of transition experience.

The first factor identified as critical to students' perceptions in the transition to college is students' perceptions of teaching quality; more explicitly, it is about how students perceive teachers' commitment to teaching and their attitudes towards students. In Chinese culture, the teacher is seen as an authoritative figure. Chan, Spratt and Humphreys (2002) conducted a study on language students about their autonomy in learning. They argued that students relied on teachers' support in deciding what they should learn.

> "The teacher was seen as a dominant figure…although students generally felt able to make certain language-related decisions themselves, they held the teacher more responsible for most areas of their learning…. This indicated a strong preference for a dominant teacher role and thus a relatively less autonomous student role." (p. 12)

In western culture, a similar view was found in a survey of 201 History majors about their experiences and expectations in the transition to a History degree programme (Booth, 1997). About 86% of the survey respondents considered that their teachers had been influential in their development as historians; 77% considered that their teachers were more important than students' own reading and thinking; and 15% regarded their teachers as being more important than discussion with fellow students (p. 6). Booth made a comment as below:

> "In teaching history to first-year university undergraduates, the overriding importance of the tutor is striking. History students newly-arrived at university regard their teachers as a principal element in their progress as historians, and look to them to share their expertise and love of the subject and provide the advice and support necessary to sustain the interest and the high level of personal motivation which they see as essential to effective learning." (p. 9)

Evans and Peel's claim on the important role played by teachers in the transition to college is supported by a study conducted in Hong Kong. Tam (2002),

in her study on the impact of university on students' academic, social and personal growth, found that there is a positive correlation between students' perceived quality of relationship with teachers and their involvement in course learning activities. She commented that:

> "The potency of the student-teacher interaction on university outcome was confirmed. Although not being the strongest factor associated with the various dimensions of students' self-reported gains, the experience with lecturers was found significantly related to all aspects of gains, especially for general educational development. Moreover, the interaction with lecturers formed one aspect of the student's university experience that largely predicted university outcome on a range of cognitive and affective attributes." (p. 225)

The second factor found to be influencing students' perceptions of college transition is whether they are given clear and effective information about the course they are doing and also the assessment methods. There is a diverse range of differences between high school and college, which school leavers have to make adjustments to when they enter college. These differences are found in assessment systems, teaching and learning styles, perspectives on discipline-based knowledge, roles of teachers and students, etc. McInnis and James (1995) suggested that:

> "Having a clear understanding of academic expectations at university is an important element in successful academic adjustment for all students …" (p. 33)

Evans and Peel found in their study that many students often received conflicting advice from parents, teachers, friends and career advisors in relation to their programme choice, university life, etc. Upon entering college, students noted the mismatch between their prior expectations and actual experiences and such a mismatch has been found to be a significant reason for withdrawing from college.

Booth (1997) made a similar comment based on the result of his study on the History majors:

> "British students possess relatively little knowledge about the academic department or the ways in which their course will be taught, and this may explain something of the dislocation frequently experienced by newcomers." (p. 4)

Shread et al (2003), in their study on computing students, found that students' ideas of computing are often based on personal experiences, for example, computer games, word processors, and chat rooms, all of which bear little resemblance to what they study in a computing degree. Problems occur when students find themselves doing a programme in which they have little interest and therefore have a low motivation to work to their best ability in the programme. They, therefore, suggested that an effective way to tackle the transition problem is to confront the problem while students are in their senior secondary years; this could be done by exposing them to the tertiary teaching and learning environment and advising them of course options of their preferred programme.

The third factor identified by Evans and Peel is the availability of induction or orientation activities to sensitize students about the social environment of the institution, especially in the first few weeks when college starts. They considered that there should also be student services after initial orientation to provide ongoing support to the students. All the new comers should be made aware of these activities and facilities, and be encouraged to take advantage of them.

The last factor raised by Evans and Peel is to what extent students are able to achieve a successful social transition. Some students may find tertiary study an isolating experience if they fail to make new friends and build their social network. It is not uncommon for some students to arrive at college without knowing anyone else in their degree programme, or even on the whole campus. They will probably miss the close contact with their teachers and high school friends. The presence of any social support is therefore worthy of notice. Evans and Peel added that social

transition is extremely important at the beginning of college and is even more important than academic transition.

All the factors suggested by Evans and Peel are social-related. The first factor, although it is associated with teaching quality, can also be seen as a kind of social support as it states the value of a quality relationship between teachers and students. The second factor, although it relates to information and knowledge about the study programme and also other academic requirements of the college, is more concerned with factual information and experience-sharing rather than the changes students need to make in their study approaches. The third factor suggests the importance of structural provisions in facilitating student integration into the college environment, while the last factor directly states the role of social factors in the transition process.

2.5 Academic adjustment versus social adjustment

Tinto (1975, 1986, 1993) contended that both academic and social integrations are important factors affecting student persistence in college. The better the students are integrated into the academic and social systems of the college, the more likely they are to complete the college study.

Bragg conducted a study in 1994 to investigate how well freshmen adjusted to college in the first semester. He found that:

> "The most cited reasons for adjustment difficulties and withdrawal considerations were related to academic adjustment from high school to college academics. These difficulties related both to academic preparedness, study skills, and reading skills. Additional adjustments included a larger number of students per class, differences in course scheduling, large reading and writing assignments and increased discipline required to complete college-level academic work." (Bragg, 1994, pp. 11-12)

He further added that those students coming from high schools of smaller size tended to have more difficulty in the transition process because they were not used to large classes and found it difficult in keeping up with the amount of studying.

While Bragg claimed that academic factors have a significant impact on the transition from school to college, a growing body of research suggests that social adjustment of students, if not more important than, is as important as academic factors in assessing student transition to college (Booth, 1997; Child & Spencer, 2002; Gerdes & Mallinckrodt, 1994; Peel & Evans, 1998; Tam, 2002). Kantanis (1997) undertook a study with students of English at Monash University with the aim of examining factors pertaining to the student transition and to study the transition issues in a holistic manner. She administered a self-developed questionnaire to the first-year students of English and collected anecdotal information through informal conversations with students and members of the Department of English. She found that many students experienced an extended, unsettled period of adjustment while they became familiar with the availability and location of resources, services and facilities. She made the following remark on the results of her study:

> "The results highlighted an area of concern that has received scant attention in the research – a heavy bias toward the significance of socialization at, and into the culture of, university as most influential in effecting a successful transition. Factors such as the impersonal nature of universities as reflected by the indifferent attitude of many academics toward students, and an ability to establish a friendship network at university actively operate as disincentives that can have serious repercussions for students in facing the challenges of transition." (Kantanis, 1997, p. 2)

The following are some quotes of research findings confirming the impact of social transition on the students' overall adaptation to the college environment:

> "We believe the findings of this study support the contention that personal adjustment and integration into the social fabric of campus life play a role at

> least as important as academic factors in student retention." (Gerdes & Mallinckrodt, 1994, p. 286)
>
> "Several studies of college students in general have shown that non-academic variables predict college adjustment outcomes more accurately than academic ability variables …. In general, these variables fall into three main categories: social (parental attachment/separation, social adjustment, and external factors), personal-emotional (emotional adjustment, coping style), and institutional attachment." (Martin Jr., Swartz-Kulstad & Madson, 1999, p. 122)

Even Tinto (1975) claimed that "other things being equal, social integration should increase the likelihood that the person will remain in college" (p. 107).

Social integration occurs in various formats, e.g. peer–group associations, participation in extra-curricular activities, student–teacher interactions, etc. Students have to devote time and effort to these activities so as to become integrated into the social environment of the college, thus also deriving benefits academically. Here is where the theory of student involvement comes in.

2.6 Student involvement versus college environment

This section aims to discuss two notable theories about the interaction between students and the college in promoting student success in college. The two theories are Alexander Astin's Theory of Student Involvement and Robert Pace's College Impress Model. Both theories were introduced in the mid-eighties.

2.6.1 Alexander Astin – Theory of Student Involvement

As defined by Astin, "student involvement" refers to "the amount of physical and psychological energy that the student devotes to the academic experience" (Astin, 1999, p. 518). Involvement has both quantitative and qualitative features. Quantitative involvement refers to the amount of time invested by a student, while qualitative involvement implies how seriously a student approaches the academic work or activities. The greater the involvement, the more the students will

get out of their academic experience. For learning and personal development to take place, students need to actively engage in the college environment both academically and socially. The highly productive institutions are those being able to promote and enhance students' academic and social engagement. Astin's theory of student involvement emphasizes active participation of students in the learning process.

2.6.2 Robert Pace – College Impress Model

Pace (1984) considers that success in college is the outcome of the combined influences of the college environment and the effort expended by the students themselves. He believes that colleges are accountable for creating a desirable environment for student learning and development, while students themselves have to invest effort and time in college activities:

> "Colleges are of course accountable for a lot of things …. But surely the students are also accountable for the amount, scope, and quality of effort they invest in their own learning and development, and specifically in using the facilities and opportunities that are available in the college setting." (Pace, 1984, p. 9)

His instrument, the College Student Experiences Questionnaire (CSEQ), was designed to measure the quality of student experience in three dimensions: *quality of effort, the environment* and *estimate of gains*. The *quality of effort scale* measures student engagement in various college activities and the effort they have expended. The *environment* scale measures student perceptions of institutional emphasis on various aspects of the student development such as the development of academic, scholarly and intellectual qualities, and the development of vocational and occupational competence, etc. This scale also covers the quality of students' relationships with peers, faculty members and administrative staff in the college. The *estimate of gains* scale asks students to estimate the progress they have made in a number of educational goals, such as general education, writing abilities, world

knowledge, vocational preparation, interpersonal skills, critical thinking, physical fitness, etc. The scale serves as an outcome measurement of student attendance in college.

The CSEQ collects information about students' actual engagement in various activities and then uses the information to infer students' attainment. Students are engaged in a self evaluation process about the progress they have made towards certain goals of education. These two pieces of information are added together to produce an indicator of institutional effectiveness in terms of enhancing student learning experience.

The similarity between Astin's Theory of Student Involvement and Pace's College Impress Model is that both theories/models emphasize student engagement in the process of learning. Institutions should provide sufficient opportunities for student growth and encourage students to take advantage of the resources available, as student success requires both student effort and a facilitative college environment.

2.7 Measuring and defining successful transition to college

The ultimate goal of studying adaptation to college is to facilitate student success in their education career at college. How should successful transition be defined? In a narrow sense, successful transition in the first year study can be manifested as successful completion of courses taken in the first year and progression to the second year of study. Upcraft, Gardner, and Barefoot (2005) suggested eight criteria to define first-year student success in a broader sense. This definition can also be applied to the assessment of successful transition to college. These eight criteria are not supposed to be met in one go. Successful first year experience may include one or more of the following criteria:

1. *Developing intellectual and academic competence*
2. *Establishing and maintaining interpersonal relationships*
3. *Exploring identity development*
4. *Deciding on a career*
5. *Maintaining health and wellness*
6. *Considering faith and the spiritual dimensions of life*
7. *Developing multicultural awareness*
8. *Developing civic responsibility*

These eight criteria concur with the major dimensions of Baker and Siryk's adaptation model. The first criterion relates to the academic dimension. "Academic competence" refers not only to the capability for academic work but also the ability to "learn how to learn" and an appreciation of what it means to become an educated person. The second, seventh, and eighth criteria relate to the social aspects of one's development. At the personal level, successful first-year students should begin to develop effective interpersonal relationships. In a broader sense, they are expected to develop a global awareness and learn to tolerate and respect differences among people and cultures. Students should also develop their civic-mindedness and become socially responsible citizens. The third criterion is about psychological and intellectual development. Successful first-year students should begin to explore who they are. This is more like a self-exploration of looking at the inner self of oneself. This criterion is supplemented by criterion six which looks at one's belief and faith. Successful first-year students should begin to reconsider and internalize what they believe and value. The remaining two criteria relate to career development and physical health. Successful first-year students should begin to get clearer about their

career goals as well as to learn to lead healthy lives and deal with stress. Updraft et al. (2005) concluded that:

> "In summary, first-year student success is more than earning a sufficient grade point average to make a successful transition to college and persist to graduation. It is making progress on becoming a truly educated person in these many ways. Colleges and universities must provide an educational environment that makes this kind of education possible" (p. 10)

Upcraft et al.'s definition of first-year student success is fairly comprehensive and covers academic, social, and psychological aspects as well as physical health and career development. Students should be made aware of these criteria and be encouraged to commit themselves to these goals of success.

On the part of the institution, the outcome of an Australian national study undertaken by Monash University and University of Melbourne in 1998, entitled *"Transition from Secondary to Tertiary: A Performance Study*" suggests five indicators by which to measure institutional effectiveness in the secondary–tertiary transition process. These five measures are:

1. *Proportion of teaching staff attributed to first-year bachelor teaching using a student to staff ratio;*
2. *Proportion of the academic teaching resources applied to first-year bachelor teaching;*
3. *Composition of university student population;*
4. *Proportion of school leavers and other commencing bachelor students generating 0.9 Student Progress Unit (SPU)*[1] *or higher; and*
5. *Value adding: proportion of bottom quartile of school leavers and commencing bachelor students by Tertiary Entry Rank (TER) generating 0.9 SPU or higher.*

[1] Student Progress Unit (SPU) refers to the number of subjects (i.e. the units of study) successfully completed.

The first two indicators suggest the teaching of first-year students should be adequately resourced at both human and physical levels. The third indicator highlights the fact that the student body may be very diverse and proper strategies should be planned to address student diversity. The last two indicators are based on students' academic performance in terms of the number of courses completed as well as value-addedness compared to the students' entry performance.

2.8 Seven principles of good practice in undergraduate education

Chickering proposed seven vectors of identify development in 1969, and subsequently revised and reordered the vectors and their specifications with Linda Reisser in 1993 in the light of the substantial volume of research undertaken since the introduction of the model. His model of identity development is supposed to be applicable to college students of all ages and diverse backgrounds.

Central to Chickering and Reisser's theory is the formation of identity along seven vectors. Each vector of identity has its direction and magnitude. To move from one vector to another is like a spiral or a series of steps rather than a straight line. Students move along these vectors at different rates and may move backwards or retrace steps. Movement on one vector may be simultaneous with change on another. Progress from lower to higher levels brings more awareness, skill, confidence, complexity, stability and integration. For Chickering and Reisser, development involves differentiation and integration as students encounter increasing complexity in ideas, values, and as they struggle to reconcile these new positions with their own ideas, values and beliefs. Chickering and Reisser's seven vectors are:

1. *Developing competence*
2. *Managing emotions*

3. *Moving through autonomy toward interdependence*

4. *Developing mature interpersonal relationships*

5. *Establishing identity*

6. *Clarifying purpose*

7. *Developing integrity*

To bring knowledge and practice closer together, Chickering and Gamson identify seven principles which they believe colleges and universities can use to encourage student development, along each of the seven vectors. They published their *Seven Principles for Good Practice in Undergraduate Education* in an AAHE Bulletin in 1987. These principles have been widely discussed in academic circles. To counter concerns of higher education about apathetic students, illiterate graduates, incompetent teaching, and impersonal campuses, they advocate seven good practices which will promote the quality of students' college experience. Their good practice guidelines are taken from the perspective of teachers or the institution, stipulating what they can do and should do to increase students' chances of success. One dominant theme of their model is an emphasis on interpersonal relationships and interaction. These seven guidelines are:

1. *Encourage contact between students and faculty*

Frequent interaction between students and the teacher, both in and out of classes, can promote student involvement in their studies and improve their motivation. Chickering and Gamson consider that student–faculty interaction will enhance not only students' intellectual commitment but also their development of values and plans.

2. Develop reciprocity and cooperation among students

Chickering and Gamson consider that good learning is “collaborative and social” rather than “competitive and isolated”. Working with others can increase involvement. To share ideas with others and to respond to others’ reactions can stimulate thinking and deepen understanding.

3. Use active learning techniques

Students should not just sit and listen. They should discuss, participate, ask questions, relate what they have learnt to their experience and apply it to their daily lives.

4. Give prompt feedback

Feedback is a powerful learning tool. It helps students put their focus right. At various points in a course, students need to reflect on what they have learnt; what they still need to know; and how to assess their own progress. Feedback from teachers provides a direction for continuous improvement.

5. Emphasise time on task

Many students lack techniques in time management. Chickering and Gamson see the importance to support students to develop effective time management skills.

6. Communicate high expectations

This guideline is intended to promote a self-fulfilling prophecy. If teachers and institutions hold higher expectations of the students, students are more likely to pay extra efforts to exert themselves to the fullest.

7. Respect diverse talents and ways of learning

There are many roads to effective learning. Students have different talents and learning styles. Students need the opportunity to show their talents and learn in

the way that works for them. Chickering and Gamson consider that both teachers and students hold the same responsibility for improving education. They claim that "while each practice can stand alone on its own, when all are present their effects multiply, together they employ six powerful forces in education. These six powerful forces are *activity, expectations, cooperation, interaction, diversity and responsibility"* (Chickering & Gamson, 1987, p. 3).

Chickering and Gamson's seven principles suggest a practical roadmap to support student success. They highlight the importance of shared responsibility of both the institution and students. The underlying assumptions of Chickering and Gamson's model are very similar to those of the theories of Astin and Pace. All these three models contend that students and the institution equally share the responsibility of maximizing student success.

Chickering and Schlossberg (2002) created a parallel set of guiding principles for college students, suggesting to them how to maximize their gains from their college experiences. This set of guidelines, labeled as *Seven Principles for Doing Your Best*, covers the following aspects:

1. *Build relationships with faculty members;*
2. *Work collaboratively with other students;*
3. *Learn actively;*
4. *Get prompt feedback;*
5. *Emphasize time on task;*
6. *Set high expectations; and*
7. *Respect diverse talents and ways of learning* (pp. 207-208).

2.9 Summing up

What can be concluded from the literature review in this chapter is that there are generic transition problems, especially in regard to the differences between the teaching and learning environments of high school and higher education, as well as matches and mismatches between students' prior expectations and early experiences in both academic and social respects.

Secondly, there is no simple consensus from studies on transition about factors or sets of factors which can reliably predict transition issues and problems. However it is important to note that institutions have a key role to play in facilitating student adaptation to the college environment, and they also have a responsibility to create a context which is conducive for learning, and to adopt strategies which may ease the transition process.

McInnis and James provided a strong claim as to why student adaptation to college should be studied.

> "There is a strong and growing view, in the face of mass participation, that initial adjustment difficulties for students will persist unless universities intervene to provide support early in the first year." (McInnis & James, 1995, p. 37)

A critical issue to determine is what forms of intervention will be the most effective. McInnis and James further suggested that it was shown in many studies that the support services given by universities were very often used by a very small proportion of students. Therefore they queried whether higher education institutions should revisit the transition issues so as to gain an understanding of students' needs and concerns in order to provide what students are really in need of. As quoted below, McInnis and James claimed, the ultimate goal of higher education is to help students, no matter what background they come from, to become independent learners.

“Efforts to improve teaching and learning in the face of the diverse needs at the first year should not be unduly constrained by traditional academic views of higher education. However if such improvements do not share the aim of providing all students, regardless of background or aspirations, with the opportunity to become independent learners, then the transition to higher education is illusory. Teaching and curriculum innovations which at least start with this assumption will be on the right track to improving the first year experience regardless of changing shape and purposes of the first degree. (McInnis and James, 1995, p. 111)

Chapter 3

Preparatory Study

3.1 Introduction

There are many ready-to-use instruments for studying the transition problems students may have when they commence higher education. Some are designed to be used locally, at an institution, for internal assessment, as well as more broadly by researchers using the aggregate national data. Some of these instruments have been tested and the reliability and validity have been established. Here lie the merits of using these instruments. The drawback is that the context for which these instruments were developed will never be exactly the same as the context in another institution. Take the present study as an example. There are obvious differences in the cultural context between Hong Kong and western countries. Hong Kong is a compact city. Most of the students are commuters and even those residing in residential halls are not really far away from home. Therefore, they are free from the problem of separation from home and friends. Secondly, the population in Hong Kong universities is quite homogenous with the majority being local students, although some universities have started to admit a small number of students from Mainland China and overseas countries. Above all, the biggest concern of using existing questionnaires is the language used in those questionnaires. Since those questionnaires were set up for studies in western countries and they were written in English, whether Hong Kong students comprehend the questionnaire in the way it was designed is unknown. It can be argued that the questionnaire can be translated into Chinese and that this will avoid language problems. However, the issue of the compatibility between the two versions remains. Will the translated version measure

the same constructs as the original one? In view of these factors, the investigator of this study decided to set up her own questionnaire to explore the transition issues which have not been systematically studied for the Hong Kong context so far. In order to widely explore the issues before a questionnaire survey was set up, a series of focus group meetings were undertaken with the target respondent groups to identify issues of concern. These focus groups were conducted in October 2002.

With a view to investigating whether there is any correlation between the transition issues and the discipline of study, the investigator included in the main study students from two different disciplines, namely Building Science and Social Studies. For the focus group discussions, students from these two disciplines were invited in order to explore the possibility of disciplinary issues that are worthy of further exploration in the main study.

In total twenty-one students from these two disciplines participated in the focus groups. They were all studying for an associate degree offered by a local university, which is one of the first three universities to launch associate degree programmes in Hong Kong. The university featured in the current study is one of the eight government-funded universities and is a key provider of associate degree programmes. It has three faculties, two schools, one division and one community college offering a range of programmes leading to different awards from sub-degree up to doctoral levels. At the time of this study, the university featured in the current study had around eighteen years of history and all of its associate degree programmes were government-funded. It has one specialized community college overseeing 90% of its associate degree programmes.

All twenty-one participants were in the final year of their associate degree programme, which lasted for two years. All of them already had one year of

experience in college. These participants were randomly selected from the student list, and were invited to join the focus groups by an email invitation. The original plan was to have thirty students to join the focus group meetings with fifteen students from each discipline and five students in a group. In the end, only twenty-one students turned up for the meetings. They were grouped according to their availability for the proposed timeslots. Finally, five focus group meetings were held with the smallest group consisting of three students and the largest group comprised seven students. The meetings were run on a semi-structured format, chaired by the investigator of the present study. A plan was developed to guide the discussion, a copy of which is attached at Appendix A. An interview assistant was present at each meeting to note down the meeting conversations and then transcribe them as meeting records. The interviewer was responsible for facilitating the group discussion by asking questions and inviting each participant to express their views on the questions raised. The discussion topics covered five major dimensions including *information they wished they had known in their first year of college, study goals, study approach including barriers encountered, support expected and sources of help, perceptions of teaching quality*, and *conceptions of learning.* In addition, the participants were encouraged to raise any issues of concern for discussion. Each meeting lasted for one hour and was conducted in Cantonese, while the notes were recorded in English.

After each discussion, the interviewer (i.e. the investigator) went through the notes together with the interview assistant immediately while both had a fresh memory of what had been discussed. The interviewer and the interview assistant also undertook an initial analysis of the focus group discussion to identify key words and phrases and to look for ideas or themes that emerged. The debriefing session after each discussion was found to be very useful; the interviewer and the interview

assistant would discuss the appropriate choice of words and expressions as the notes were written in English, while the focus group discussion was in Cantonese. They also discussed whether the strategies and the focus of the meetings needed to be refined and whether there were any further issues which needed to be clarified with the remaining groups.

In hindsight, there might have been better ways to manage the focus group discussions, such as to tape the conversation and then transcribe them for further analysis. However, the purpose of these focus group discussions was to uncover major themes rather than subtle differences among the participants, and so the approach adopted here did serve the purpose of identifying themes according to the opinions or ideas that were repeated within a meeting or across the meetings. This series of discussions provided a rich source of preliminary data to inform the development of the questionnaire for the main study.

3.2 Findings

Through these focus groups, a number of observations were uncovered. These observations are discussed in terms of students' perceptions of college adaptation, the new learning environment, management of learning, motivation, goals of study, and self-evaluation of progress.

3.2.1 Perceptions of adaptation

It is obvious that the participants did not feel they had problems of transiting from high school to higher education irrespective of their field of study. A few of them admitted that they might have had some problems at the very beginning, but the problems were too minor to be worthy of attention as they were able to overcome them within the first few weeks after their arrival at college. One student

said that, from his observation of other students, adaptation problems could be resolved within six months at worst.

3.2.2 Learning environment

When they were asked to compare the learning environment of the college featured in the current study with that of their secondary school, none of them deemed there were any problems in relation to structural changes including class time (Structured vs Flexible); class grouping (Static vs Varied); and relationships with teachers and fellow students (Group vs Individual). Instead, they in general favored flexible class time, which they regarded as a kind of freedom they enjoyed in college but not in secondary school. There was one participant who did observe that such freedom was abused by some students, who always skipped classes held at “odd times” such as early mornings and late evenings. As regards class grouping, none of them expressed any concerns for not having a group of people following the same timetable on a day-to-day basis. All of them reported that they could fit into the environment very quickly and were able to make new friends within a few weeks after they entered college. They were satisfied with the physical environment as the campus was more spacious and there were different kinds of facilities. They were satisfied with the teaching quality and found most of their teachers helpful and knowledgeable about their subjects, although some of them might need to improve their teaching skills. The physical facilities of the institution were regarded to be far better than those of their secondary school, although they expected some improvements to be made on computing equipment. They could also identify some non-physical resources such as the mentoring scheme, although most of them did not make use of this provision. Those who joined the mentoring scheme commented that the effectiveness of the scheme relied on the enthusiasm and rapport between the

mentor and the mentees. However, very often the scheme was no longer in operation during the middle of the semester and no monitoring of the implementation of the scheme was undertaken by the college featured in the current study.

3.2.3 Learning

(i) Study approach/learning style

As regards aspects of learning and study strategies (Individual vs Group), most of the participants appeared not to have given serious consideration to their study approaches and the learning styles they preferred. Are they visual learners or verbal learners? Do they prefer to learn by seeing or hearing, reflecting or acting, reasoning logically or intuitively, memorizing or visualizing, steadily or in fits and starts (Felder & Silverman, 1988; Felder & Spurlin, 2005)? They also did not talk much about the strategy they adopted to handle the academic demands. Are they surface learners, deep learners, or achieving learners? Although none of the participants were able to articulate in what ways they thought they could learn more effectively, they generally accepted that being more proactive and independent would help them to be more successful in their education career.

(ii) Workload, effort and time management

Some of the participants indicated that they felt overwhelmed by coursework and assessment, but none of them reported having sought any help to solve the problem. They heard about the Whole Person Development Scheme advocated by the college featured in the present study, but they did not take part in the scheme because they felt they should devote more time to their studies. They were aware of the activities organized by student clubs and societies as well as programmes offered by the college's student services but they could not spare time for these activities. As regards time management, they said they knew the

availability of training courses on time management but, surprisingly, none of them had attended these courses to improve their skills in this area.

They chose to respond to the academic demands rather than to take control of them. It was as if they did not think there were any solutions except working harder to meet deadlines and requirements. To most of them, working harder means devoting more time to their studies. This is consistent with the findings that Chinese students believe in effort more than ability, while western students believe more in ability than effort. Chinese students often assume a positive correlation between the effort they put into their studies and the result of learning (Watkins, 2000, 2007).

Since the respondents considered there were too many assignments, they were kept back from extra-curricular activities because they wanted to concentrate on their studies. One participant said that she found too much of her time had been spent on assignments and she was left with too little time to think deeply over what she had learnt. While participants claimed that they had no time to take part in extra-curricular activities and complained about the heavy workload, they took up part-time jobs as private tutors, Jockey Club assistants, or student helpers. They remarked that many of their classmates worked part-time too. On the one hand, participants declared that they found the workload too heavy and had time problems, yet on the other hand they took up part-time jobs. Why they were so motivated to work part-time is an interesting question. Did they need a part-time job to finance their education? Or is it a popular culture that college students should work part-time? Or are there other reasons?

In general, the participants considered the academic workload heavy. A number of issues relating to students' perceptions of workload need to be explored further. Is it really because of the amount of work itself? Or is it because the students

did not make the best use of their time? Are workload and time management two separate issues? Or are they inter-related?

(iii) Group work

Issues relating to group work such as arranging meetings, unenthusiastic members, and uneven work distribution were raised at the meetings. Nevertheless the majority still accepted that group work provided very useful learning experiences, and that they did not have such opportunities when they were in high school. When they were asked to suggest a desirable distribution between group work and individual work, the suggested range of distribution varied a lot. The ratio concerning distribution between group work and individual work ranged between a ratio of 30% to 70% and a ratio of 70% to 30%. The Building Science group seemed to be more satisfied with their group work arrangement as none of them raised the issue for further discussion.

(iv) English language competence

The Social Studies group suggested that inadequate English language competence was a major learning obstacle to them. Some of them indicated that they had difficulties in comprehending the assigned readings because there were too many technical terms and difficult words. Some other students commented that writing in English posed serious problems to them, as they could not freely express their ideas and present their arguments in English. Several students said that they could not speak accurately and fluently in oral presentations and group discussions.

3.2.4 Motivation

Most of the participants appeared to be motivated to study hard because all of them indicated that they would pursue a full degree programme; therefore, doing an associate degree was a pathway for them to attain a full degree. Those, who

indicated that they might not enter a degree programme right away, said that they would eventually enroll in a degree programme in the future. Some students indicated they had made a second attempt at the Advanced Level examination (i.e. the university entrance examination), hoping to achieve a better result in order to get into a degree programme. As expressed by the participants, to obtain a bachelor's degree was a major goal to them. There are two major routes for associate degree students if they wish to enroll in a degree programme. One is to slot into the second year of a three-year government-funded full-time programme offered by local universities. The other is to do a self-financed top-up degree offered by local or overseas institutions. Since there are a limited number of second year places funded by the government, the competition among associate degree graduates is keen. The focus group participants described behavior that is quite examination-oriented. They showed that they were very anxious about their grade point average (GPA), which was the key determining factor in whether they would successfully secure a place in a government-funded degree programme.

3.2.5 Goals of study

Most of the participants considered that university education is directly linked to their competitiveness in the job market. A university degree is a means to help them integrate into society. They believed that most of their peers nowadays have a bachelor's' degree and therefore they need one too, otherwise they will lose their competitiveness in the employment market. Since they were vocational-oriented, they preferred to acquire practical skills and knowledge of a particular field so that they would fit into the work force immediately. In general, the Building Science group was more satisfied with the training they had received so far because the career path set for them was clearer and they felt they were being trained for a

particular profession. In contrast, the Social Studies group expressed more dissatisfaction with their programme as they commented that the knowledge and skills they gained from their programme were not substantial enough for them to work in a particular business or industry. They had more criticisms about their study programme because they felt that what they had learnt was not specific enough for them to secure a job. Some of them said that they might not choose the same programme if they could make their programme choice all over again.

3.2.6 Self-evaluation

The main sources of associate degree students are those who have not achieved the necessary results in the university entrance examination to be admitted to a full degree programme. The university record showed that 27% of the 2003 intake for associate degrees had repeated Form Five (i.e. Ordinary/Certificate Level), while 25% of them had repeated Form Seven (i.e. Advanced Level). This finding shows that associate degree students are not generally performing as well as those in the full degree programmes. Do associate degree students have a sense of inferiority because they are performing less well in the university entrance examination? Some students believe that their intellectual ability is a fixed trait, while some believe that they can develop their intellectual ability through effort and education. Students with a fixed mind-set care about how they will be judged and believe that effort is not needed if one has the ability. They very often do not recover well from setbacks. By contrast, students with a growth mind-set consider that effort ignites one's intelligence and causes it to grow. When they face failure, they escalate their efforts and look for new learning strategies (Dweck, 2008). Do associate degree students evaluate their study approaches and make sufficient changes to cope with the new demands? Interestingly, one focus group participant said that he did not see himself

as a poorer academic performer compared to his degree counterparts. He did not agree there were any serious self-concept problems among his fellow students. He considered that the poor public examination result was caused by one's motivation rather than one's ability. Many students did not perform well, mainly because they took a very casual attitude towards their studies and not because they lacked the ability to do well. He commented that some of his fellow students were allocated a place in an associate degree programme because of a wrong choice in JUPAS. JUPAS stands for "Joint University Programmes Admissions System", which is the process for Hong Kong secondary school students applying for admission to university programmes.

When asked whether they were satisfied with the progress made in their academic endeavors, some participants did mention that they found themselves becoming more confident and more expressive of their ideas. Some were satisfied with their improvements made in skills involving critical thinking, interpersonal relationships, and public speaking.

3.3 Summing up

There is some evidence from these focus group discussions that the issue of adaptation has not been properly attended to by the students. The participants did not seem to be sufficiently aware of the changes required for the transition to college especially regarding their roles and responsibilities as a learner. They also appeared to have little understanding of the college's assessment requirements as well as the teaching and learning mode. Very few of them mentioned any changes they made in their learning approaches in order to cope with the academic demands. Some of them thought they would improve if they put in more time and effort to their studies. The

major difficulties they identified included group work, time management, workload, and English language proficiency. However, none of them mentioned any action they had taken, or planned to take, in order to get themselves out of the learning difficulties. Very few of them utilized the college provisions to improve their academic adjustments.

The focus group participants seemed to be satisfied with the college's social learning environment. They reported they were satisfied with the teaching quality and were able to make new friendships. However, they did not seem to integrate well into the college environment. Most of them seldom took part in student activities. They gave an impression that they were quite remote from their college, and that they considered college simply as a place for academic activities and not a venue for socialization. Learning, to them, is more or less restricted to in-class activities, while out-of-class activities should always take lower priority. Since they were in an associate degree programme, they were very keen to enroll in a full degree programme after graduation. Therefore, they were motivated to study hard because a high GPA would increase their chance to be considered for a government-funded degree programme. However most of the participants admitted that they found the workload overwhelming and their time management skills were poor. What they did was to spend more time on their studies, as they generally believed that there is a direct relationship between the effort paid and the outcome of learning. They appeared to be taking a very passive role in the learning process.

The issues identified in these discussions will be further examined in the main study. Details of the methodology will be described in the next chapter.

Chapter 4

Methodology

4.1 Introduction

This thesis adopted a mixed methodology to investigate the research questions set for the study. The main study consisted of two phases. The first phase was a quantitative survey involving about three hundred students and the second phase was a qualitative study comprising twenty-four face-to-face interviews. To begin the investigation, five focus group meetings were conducted with the aim of defining the scope of the quantitative study and to guide the development of the instrument to be used. Details about the administration and the results of the focus group discussions were given in Chapter 3. This chapter aims to discuss the methodology adopted for the main study. The two chapters that follow will present the findings of the investigation.

Before discussing each phase of study in greater detail, it may be necessary to articulate the rationale for quantitative and qualitative methods and to explain why a mixed methodology was adopted. Quantitative and qualitative methods belong to two different research paradigms (e.g. Best & Kahn, 1993; Sale, Lohfled & Brazil, 2002). In general terms, quantitative methods, which focus on analyses of numerical data, are based on positivism, whereas qualitative methods, which involve analyses of narrative data such as interviews, pictures, videos and artifacts, are based on constructivism (e.g. Tashakkori & Teddlie, 1998; Gay & Airasian, 2000; Creswell, 2003). There are strengths and limitations in both methods. Such issues provoke continuing debates in the human and social sciences. There are researchers (e.g. Lincoln & Guba, 2003) who maintain that the paradigms of the quantitative and

qualitative approaches are not commensurable. Others (e.g. Reichardt and Rallis, 1994) contend that both methods can form an enduring partnership as they have enough similarities in fundamental values. The former view is mostly based on different theoretical standpoints of the two approaches, while the latter focuses on the compatibility of the two research methods.

Both quantitative and qualitative methods offer advantages and disadvantages and have their places in educational research (e.g. Slavin, 1992; Gay & Airasian, 2000). The choice of research method should be aligned with the research goals, with due consideration given to the resources available. If the goal is to make generalization to a population based on an investigation of an adequate sample, quantitative methods are preferred. If the aim of the research is to obtain in-depth understanding of the experiences of a particular group under study, qualitative methods are more desirable (e.g. Vanderstoep & Johnson, 2009). The discussion that follows will touch on how the two approaches differ from each other in terms of assumptions, purposes and operation.

4.1.1 Quantitative methods versus qualitative methods

(i) Assumptions

The basic world view in quantitative research is that social facts have an objective reality. Such a view is taken from the perspective of positivism (e.g. Tashakkori & Teddlie, 1998; Gay & Airasian, 2000). This leads to an emphasis on establishing research methods whereby variables relating to reality can be identified and the relationships therein can be explored.

Qualitative methodology, on the other hand, takes a constructivist perspective. The underlying assumption is that reality is socially constructed (e.g. Tashakkori & Teddlie, 1998; Gay & Airasian, 2000). It represents the perspectives

and interpretations of individual people. In the research environment, all participants, researcher(s) and subjects together constitute the reality to be investigated (e.g. Creswell, 2003). There is no research-subject distinction. Subject matter within the research environment of a research study is paramount. Variables to be investigated are, therefore, complex, interwoven and not easily amenable to being measured.

(ii) Purposes

Quantitative research emphasizes generalizability of findings, prediction of future outcomes and causal explanations among the variables under investigation. Its purpose is to predict rather than to describe. It is intended to generalize the findings from the sample to the overall population from which the sample is drawn (e.g. Vanderstoep & Johnson, 2009).

Qualitative research is intended to go "in-depth" into a topic. It aims to produce a rich narrative understanding of the topics under investigation, rather than making generalization of the results. Its purpose is to provide depth about the thinking and experience of the sample under study. Therefore, it focuses on contextualisation within the research environment, which necessarily includes the individualism and idiosyncrasies of all participants and collective interpretation of findings. Since the sample size of qualitative research is usually small and non-random, it would not be possible to know whether the participants' experiences are representative of others who are not included in the study (e.g. Vanderstoep & Johnson, 2009).

(iii) Operation

Quantitative research starts with hypotheses and theories (e.g. Sprinthall, Schmutte & Sirois, 1991; Best & Kahn, 1993). Aspects of the research environment relevant to the hypotheses and theories are examined in order to derive variables for

quantitative investigation, usually via a battery of statistical procedures. Manipulation and control are, therefore, commonplace as is direct experimentation. It calls for randomization and adequate sample size. Therefore, one criterion of quality in quantitative research concerns the size and representativeness of the samples used. It also requires instruments that have been validated in some way. Deductive reasoning forms the basic logical device to draw conclusions (e.g. Sprinthall et al., 1991; Best & Kahn, 1993). Consensus is highly desirable. The outcome of quantitative research is almost a reduction of data to numerical indices and articulated in abstract language in write-up. In quantitative research the researcher has to be detached and impartial (e.g. Sprinthall et al., 1991).

Qualitative research typically ends with hypotheses and grounded theory. The basic approach is naturalistic and inductive in the sense that the research study allows events in the research environment to flow and take it to whatever outcome arises (e.g. Best & Kahn, 1993; Gay & Airasian, 2000). Emergence and portrayal are the key expectations (e.g. Creswell. 2003). The researcher is herself/himself a participant and the instrument in the research study, giving rise often to the criticism of subjectivity (e.g. Sprinthall et al., 1991). Information richness of the cases and the observational/analytical capabilities of the researchers are key qualities of qualitative research (e.g. Best & Kahn, 1993). Qualitative research focuses on searching for patterns, pluralism and complexity (e.g. Gay & Airasian, 2000). Of course, qualitative research is not and should be inimical to making minor use of numerical indices. Write-up of qualitative research is descriptive (e.g. Sprinthall et al., 1991). In qualitative research, the researcher needs to have personal involvement and should not shun partiality (e.g. Creswell, 2003). Empathic understanding rather than impartial objectivity is the ideal posture.

4.1.2 Mixed methods approaches

"Mixed method studies are those that combine the qualitative and quantitative approaches into the research methodology of a single study or multiphased study" (Tashakkori & Teddlie, 1998, pp. 17-18). Many researchers (e.g. Reichardt & Rallis, 1994; Tashakkori & Teddlie, 1998; Vanderstoep & Johnston 2009) set out to combine both methods in investigations so as to embrace the best of both qualitative and quantitative approaches. A two-pronged approach brings both breadth and depth to the investigation.

There are numerous ways to integrate qualitative and quantitative methods in investigations. For example, to use a qualitative study to identify themes for a quantitative survey to be set up or to follow up a quantitative study with a qualitative focus group on the themes identified. There are also qualitative studies that analyze data from both quantitative and qualitative perspectives. For example, descriptive statistics are reported for particular themes of patterns found in the narrative data obtained (e.g. Sprinthall et al., 1991; Creswell, 2003; McMillan, 2004).

A mixed methodology not only helps establish the validity and reliability of the data but also enriches understanding of the phenomenon under investigation. They should be complementary rather than antagonistic towards one another. Researchers may use whatever method is appropriate for the study or a combination of both, instead of relying on one single method. Quantitative and qualitative methods need not and should not be held to be incompatible. They are complementary for the advancement of scientific knowledge (e.g. Gay & Airasian, 2000; Sale et al., 2002).

The aim of the present study is to achieve a sufficiently in-depth understanding of associate degree students' perceptions of their transition to higher

education, the challenges they face, and their strategies to cope with the new academic demands. To achieve the purpose, this thesis adopted a mixed methods design combining both the quantitative and the qualitative methods to gather, interpret and report the data for the study. The first phase of this study used a questionnaire to explore how the sample perceived and responded to the transition from school to college. The purpose is to identify patterns of perceptions of the student cohort as a whole so as to obtain an overview of the issues under investigation. Since what is of interest of this study is how the students coped with the transition from high school to higher education, individual accounts of experiences will refine and extend our understanding of the transition process that the sample underwent. Therefore the second phase of the study adopted a qualitative method to interview twenty-four students individually. The purpose is to elicit individual experiences concerning the school to college transition, and the strategies that the sample adopted to cope with the challenges. It is hoped that the interview data would provide substance to the quantitative results obtained, thus permitting a fuller understanding of the school to college transition. Details of both the quantitative and qualitative approaches are discussed in the following sections.

4.2 Methodology – Quantitative

4.2.1 Questionnaire survey

The first set of data collected for this study was via a questionnaire survey. The questionnaire in this study was developed with reference to two major pieces of information. The first piece of information was obtained from the findings of the focus group discussions as described in Chapter 3. The focus group discussions revealed that the issues of adaptation in the first year of college covered areas of

learning, motivation, goals of study, workload, time management, and self-evaluation. These issues became the centerpieces for the development of broad areas of interest in the questionnaire. The second source of information was the Your First College Year (YFCY) Survey (http://heri.ucla.edu/yfcyoverview.php) developed by the Higher Education Research Institute at the University of California at Los Angeles (UCLA). The YFCY Survey has been offered since 2000. It is the first national survey in the United States designed specifically to assess the academic and personal development of students over the first year of college. It collects information on a wide range of cognitive and affective measures, aiming to provide comprehensive institutional and comparative data for analyses of persistence, adjustment, and other first-year outcomes. Based on these two sources, a questionnaire was developed with the aim of investigating the adaptation issues that associate degree students may face in their first year of college. An early draft of the questionnaire was administered to eleven students. The time that students spent completing the questionnaire was recorded and a proforma containing the following questions was given to the students to complete:

1. If there are any items which make no sense to you, list the item number in the space provided.
2. Are there sufficient option choices for each item? Are there any option choices which can be removed? Please list the item number in the space provided and mark the option choice which needs to be reviewed.
3. Does the questionnaire miss any important items?
4. Are there any items which can be removed from the questionnaire?

5. Are there any difficult or confusing words/phrases? Underline them in the questionnaire.
6. Do you think this questionnaire is able to achieve its stated objectives?
7. Are there any other comments about this questionnaire you would like to make?

The time required for completing the questionnaire varied from eight to thirty minutes. Although four students considered the questionnaire to be too long, the general reaction about the questionnaire was positive. Two students considered the items on events or circumstances related to learning (e.g. miss class, fail to complete homework on time, etc) not useful. One student considered the items about social environment not relevant. “Persistence” seemed to be a difficult word to some of them. A debriefing session involving all these eleven students was held afterwards where some clarifications on their reactions about the draft questionnaire were made. Although the questionnaire was considered to be too long, the average completion time of twenty minutes was regarded as acceptable. Therefore, most items in the draft questionnaire were retained apart from the one on “Are you living in a hostel?”, since the students indicated that hostel accommodation was restricted to full degree students. In addition, two separate items on “communication skills” and “writing ability” were combined into “communication skills in writing” to render the meaning of the item more precisely. Although two students commented on the relevance of the items on the learning and social environment, the items on these two dimensions were retained because they were designed to measure students’ academic and social adjustments. Since the questionnaire was administered via a web-based system, words which were considered to be difficult such as “persistence” were given a Chinese translation when the respondent put the mouse over the word. An instruction

about this feature was given before the respondents started to complete the questionnaire.

After refinement, the final questionnaire covers nine dimensions of interests which are considered to be critical to student success in college study. Each of these dimensions contains a number of sub-items which represent different facets of the broad questions of interest. Taken together, the items help to specify the nine dimensions to be measured. These nine dimensions, together with the sub-items, are introduced in the following sections.

(i) Self-concept – This dimension contains twenty-two sub-items related to five skills which are considered to be essential for college study. These five skills are "academic skills", "generic skills", "self-management skills", "people skills", and "knowledge". Under each of these skills, a number of sub-items are developed as exponents of the dimension of interest. Students are asked to rate themselves on each sub-item, comparing themselves to the average person of their age. The self-concept dimension is specified by the following items:

Academic skills	*1. English language ability* *2. Communication skills in writing* *3. Public speaking skills* *4. Reading speed/comprehension* *5. Mathematical skills* *6. Computer skills* *7. Study skills* 8. *Ability to learn on your own effectively*
Generic skills	*9. Creativity* *10. Ability to think critically* *11. Problem-solving skills* *12. Organizational skills*
Self-management skills	*13. Ability to work independently* *14. Time management skills* *15. Self-confidence* *16. Persistence* *17. Ability to adapt to change*
People skills	*18. Ability to work in a team* *19. Leadership ability*

	20. Interpersonal skills
Knowledge	*21. Common sense/General knowledge* *22. Current affairs knowledge*

(ii) Personal development – This dimension contains the same set of items as the self-concept dimension plus one additional item on "subject knowledge" under the knowledge domain. This dimension contains twenty-three sub-items in total. Students are asked to self-evaluate their own development in all the areas covered by comparing themselves after one semester in college against themselves at the time when they first commenced the associate degree programme. These two dimensions, self-concept and personal development, together attempt to throw light on students' self-evaluation of themselves and to note whether their self-concept has improved or worsened after the first semester in college.

(iii) Time spent – This dimension asks students to indicate how much time they normally spend on the activities identified in a typical week. There are in total nineteen activities denoting three sets of activities, namely university-related activities covering both curricular and co-curricular activities, job/household duty/community services, and activities for socializing and leisure. The activities under this dimension are listed in the following:

University-related activities	*1. Lectures/seminars/tutorials/laboratory sessions* *2. Individual academic work/study* *3. Group academic work/study* *4. Participating in student societies/activities* *5. Organizing student societies/activities*
Job/ Household duty/ Community services	*6. Part-time work* *7. Housework* *8. Volunteer work* *9. Religious services/activities*
Socializing activities	*10. Socializing with friends* *11. Listening to music* *12. Shopping* *13. Exercising/Sports*

	14. *Watching TV/video* 15. *Cinema/Concert* 16. *Reading for pleasure* 17. *Playing video/computer games* 18. *ICQ/Internet chat room* 19. *Navigating WWW/Internet*

This dimension aims to understand how students distribute their time among academic study, social life, duties and services. The pattern of their time spent provides a sense of the life pattern built by students themselves.

(iv) Frequency in learning activities – This dimension aims to observe events or circumstances relevant to student learning activities. Fourteen events/circumstances are covered in this dimension. Sub-items 1 to 4 aim to understand how interactive students are in the learning process. Sub-items 5 to 10 explore how well students manage to cope with the academic demands. Sub-items 11 to 14 ask students to indicate the amount of effort they have given to their studies. These items together throw light on students' academic adaptation to college study.

Interactive learning	1. *discuss course content with other students outside of class* 2. *study with other students* 3. *consult teaching staff outside of class* 4. *work on group projects*
Handling of academic demands	5. *fail to complete homework on time* 6. *miss class due to part time job* 7. *miss class to meet an assignment deadline* 8. *feel bored in class* 9. *feel overwhelmed by coursework/assignments* 10. *find it difficult to follow lectures*
Effort paid	11. *participate in class discussion* 12. *do additional readings on topics taught in class* 13. *search for information on the Internet* 14. *go to library to find relevant information*

(v) Effective learning methods – This dimension identifies twelve popular learning approaches to college study. Students are asked to indicate how agreeable

each of the following learning approaches is to their learning style. The learning methods include:

1. *Class discussions*
2. *Group work*
3. *Individual work*
4. *Class presentations*
5. *Large group lecturing*
6. *Individual/small group teaching*
7. *Discussing work with other students outside of class*
8. *Discussing work with staff members outside of class*
9. *Online learning*
10. *Work placement*
11. *Visits and fieldtrips*
12. *Real world examples and case studies*

(vi) Barriers to learning – This dimension asks students to identify barriers to their learning. Seven common barriers are listed for their assessment.

1. *Your language ability*
2. *Your study skills*
3. *Your time management skills*
4. *Your motivation*
5. *Insufficient library facilities*
6. *Inadequate computing facilities*
7. *Class size is too large*

(vii) Reasons for entering tertiary education – This dimension asks students to indicate their principal reasons for entering tertiary education, thus throwing light on their motivation for tertiary education. Nine reasons are identified as follows:

1. *To gain an academic/professional qualification*
2. *To fulfill parents' expectations*
3. *You find it still too early to join the work force at your age*
4. *You find your qualifications restricting your search for jobs of promising prospects*
5. *To study a field that really interests you*
6. *To receive training for a specific job/profession*
7. *To develop talents and abilities*
8. *To experience university life*
9. *To contribute more to society*

(viii) Choice of study programme – This dimension aims to investigate the factors affecting students' choice of study programme. Five factors are identified as follows:

1. *Being interested in the programme*
2. *Having the ability to do well in the programme*
3. *The programme offers good career prospects*
4. *The programme has a good academic reputation*
5. *Public examination results*

(ix) Social environment – This dimension aims to understand students' social engagement in college, which covers students' participation in and commitment to extra-curricular activities, their utilization of academic support services, their amount of interactions with teachers, as well as their relationships with other students. Students are asked to respond to the following eight items:

1. *Are you a member of the Student Union or any other student clubs or societies?*
2. *Have you joined any activities organized by the Student Union, clubs or societies?*
3. *Have you joined any programmes/activities organized by the Student Development Services?*
4. *Have you joined the Student Mentoring Scheme?*
5. *How often do you chat with the teaching staff outside of class?*
6. *How often do you ask a teacher for advice after class?*
7. *Are you able to make new friendships?*
8. *How would you rate your relationships with other students?*

Apart from the above dimensions, the questionnaire also collects respondents' demographic and background information (7 items); their grades in two public examinations viz secondary school leaving examination (3 items) and university entrance examination (2 items); their grade point average (GPA) for the first semester in college (1 item); their rating of the overall teaching quality (1 item); and also their self-report of enjoyment of campus life (1 item). Lastly, there are 4 items on the medium of instruction opted for different learning situations including lectures, seminars/laboratory sessions, tutorials and presentations.

4.2.2 Formation of variables

(i) Aggregated variables

The areas that this study is interested in are the broad dimensions of the questionnaires as described in 4.2.1. The sub-items under each dimension are

exponents of the area of interest. To achieve the aim of the study, the first issue in relation to the analysis approach is to find a way to quantitatively summarize the responses of the questionnaire items in respect of the broad dimensions. The objective of the data reduction procedures is to derive a set of indices to capture, in quantitative terms, the views of the respondents in the dimensions covered. In this respect, the issue of levels of measurement needs to be carefully considered. The actual responses are nominal or, at best, ordinal level of measurements. While there are statistical procedures to analyze such data, they may not yield the results that can help achieve the objectives of the present study. On the other hand, it may not be too informative to analyze individual items as they represent facets of the dimension only. What is of interest to this study is the overall attitude in those dimensions. Data reduction statistics are, therefore necessary. There are a number of ways to quantify ordinal or nominal data. They belong to the family of statistical procedure of non-parametric statistics, e.g. correspondence analysis, homogeneity analysis, non-parametric regression, non-parametric factor analysis and non-parametric principal analysis, etc (Corder & Foreman, 2009). For the purpose of the study, a simple and straightforward method to use mean ratings by individual respondents on items across a domain was used. Responses to all the sub-items under a dimension were aggregated to represent students' overall views on the broad dimensions of interest and to form quasi-continuous variables. The items in the questionnaire are on Likert type scales. By taking the mean values across all sub-topics under a dimension, ratings of individual students will have a form close to a set of ratio-interval measurements. The nine aggregated quasi-ratio interval variables are listed in the following, while a detailed listing of the aggregated variables is found in Appendix B:

1. Self-concept
2. Personal development
3. Time spent
4. Frequency in learning activities
5. Effective learning methods
6. Barriers to learning
7. Reasons for entering tertiary education
8. Choice of study programme
9. Social environment

(ii) Background and categorical variables

Two types of variables were chosen as respondents' background information. They are factual information including grade point average (GPA); two sets of public examination grades, including Advanced Level English (ALE), Advanced Level Chinese (ALC), Certificate Level English (CLE), Certificate Level Chinese (CLC), and Certificate Level Mathematics (CLM); as well as students' categorical choices of medium of instruction preferred for different learning contexts, quality of teaching, and enjoyment of campus life. Ratings to these items are not amenable to aggregating, and should not be aggregated as they are all distinct categorical/ordinal variables.

4.2.3 Overview of analyses

The nine aggregated variables are regarded as the indices of higher education. The main thrust of the analyses of this questionnaire survey is to investigate the following:

(i) The analysis examines student responses to items which reflect their academic and social adaptation to college study. Analysis will be made mainly on descriptive statistics.

(ii) The second analysis investigates to what extent respondents' standing on those indices of higher education (i.e. the nine aggregated variables) are related to their standing on the background/categorical variables including (a) enjoyment of campus life, (b) perceptions of teaching quality, (c) GPA, and (d) public examination grades. To that end, a series of Analysis of Variance (ANOVA) with the aggregated indices of high education as dependent variables and the background/categorical variables as independent variables will be performed. The results of the ANOVA will uncover diverse degrees of agreement in the various dimensions of university life among students from different backgrounds.

(iii) It is also expected that there are interrelations among the aggregated variables. Identifying those relationships not only helps to summarize the variables further but will also make the results of the analyses more informative and pertinent to the aims of the study. That can be achieved by factor analyzing the aggregated variables to uncover underlying dimensions among the aggregated variables.

(iv) Factor analysis will be used as a data reduction procedure to uncover underlying patterns of relationships among the aggregated scales based on the correlations among them. The results of the factor analysis should provide insight into the research being undertaken; this is because the factor pattern from the analysis represents dimensions underlying them at a higher level of generality. To throw further light on the research, factor scores will be extracted from the factor analysis solution to form higher level indices within the research domain.

(v) Finally, cross-tabulations will be used to examine the relationship between the two aggregated scales of Self-concept and Personal development to answer the following two questions:

(a) What are the correlations between abilities perceived to be lower than the others by respondents and their ratings on personal development? and

(b) What are the correlations between abilities perceived to be higher than the others by respondents and their ratings on personal development?

4.3 Methodology – Qualitative

The second phase of the study was based on a qualitative approach to further explore issues identified in the questionnaire survey and to supplement, corroborate and investigate the results. The merit of the qualitative approach is that it allows the investigator to probe the ideas of respondents and discover what they are thinking about the network of issues under investigation e.g. how they conceive their adaptation to the college environment, overall. The investigator then decided to adopt the one-to-one interviewing approach with a selected group of students according to a semi-structured protocol. This approach provides a great advantage in that the investigator can explore the views of respondents and further pursue any unanticipated issues which may emerge during the process. The data collected through the interviews were transcribed. The transcriptions were analyzed and a number of themes were identified for further discussion.

4.3.1 The interview plan

The investigator first set up an interview plan and piloted it with four students. There were three reasons for undertaking a pilot of the interview plan. The first reason was to see whether the questions made sense to the interviewees. The second reason was to explore whether the interview plan was able to cover most of the topics which were worthy of discussion, while the last reason was to check whether any part of the plan needed to be modified.

After the pilot with the four students, three modifications were made. The first modification was to expand the section about student background information by adding four items, which included two items on the medium of instruction used in secondary school at both Certificate-level and Advanced-level studies respectively; one item was to ask whether students took part in any student orientation activities upon their admission to college; while one item was to ask whether students had any part-time or summer jobs. The two items on the medium of instruction were added to shed light on the language training of the students because English language competency was identified as a learning obstacle in the focus group discussions and the survey. The item on students' participation in orientation activities was included to explore what institutions would do to facilitate student success in the college environment. The item on part-time and summer jobs might shed light on students' priorities in terms of time management and also their priorities in handling multiple demands on their time. The second modification to the interview plan was to add a section asking students to indicate the kinds of support they expected from the institution. The last modification was to ask students to articulate what success in college meant to them and what they expected to achieve in their college education.

The final interview plan contains six sections. The first section asks about students' background information including their public examination grades, the medium of instruction in secondary school, participation of college orientation activities, and part-time job commitments. This section aims to understand the interviewees' readiness for college study.

The second section asks students to reflect on their academic achievements and social engagement by assessing their own academic attainment and their satisfaction with their attainment, as well as by evaluating their relationships with teachers and the fellow students. They are also asked to comment on the quality and attitude of their teachers and the fellow students. These two sections together set the scene of the students' background for the interpretation and discussion of the themes discovered in these interviews.

The third section explores how well the interviewees have adapted to college study both academically and socially. They are asked to rate the academic demand; to indicate the amount of time they spend on self-study and class attendance in a week; to think about whether there are any mismatches between their expectations of college education and their actual experiences, as well as to compare their learning and social experiences between their time in secondary school and college.

The fourth section focuses on how the interviewees handle their learning and what learning difficulties they have experienced. The fifth section aims to explore whether the interviewees are satisfied with the support they have received from their families and the institution. The last section asks the interviewees to define college success and to articulate what goals they wish to attain in college education.

4.3.2 Paired sample design

A paired sample design was used to select participants for the interviews. This study involved students from the disciplines of Building Science and Social Studies. The investigator extracted the academic history of the 2006 cohort in these two disciplines from the central student database. In each discipline of study, students of the same gender and the same university entry score (i.e. UGC entry score) were put into three groups, namely the low-performer group, the mid-performer group and the high-performer group respectively. The university entry score represents the sum of the scores of two passes in the Advanced Level examination. The higher the score, the better the performance. The low-performer group obtained an entry score between 1 and 4; the mid-performer group obtained an entry score between 6 and 8; and the high-performer group obtained an entry score between 10 and 12. The university entry score can be as high as 20. Since the subjects in this study were admitted to associate degree programmes, the university entry score they obtained was comparatively lower than that of their degree counterparts.

The second selection criterion was based on students' semester-end academic result after the first semester in college. For each group, one student with a high GPA and one with a low GPA were selected. A high GPA referred to a score of 3.3 (i.e. B+) or higher. All the selected participants in the present study scored 3.3 or above except one boy in the Social Studies group who received a score of 3.2. For the Building Science group, a low GPA referred to a score lower than 2.0 (i.e. C), while for the Social Studies group, a low GPA referred to a score below 2.7 (i.e. B-). The difference in the boundary of the low GPA was due to the fact that the Social Studies group had a higher GPA than the Building Science group, while the students'

GPAs of the Social Studies group were closer to each other. Therefore, the difference between the high performers and the low performers in the Social Studies group was not as clear-cut as the difference among those in the Building Science group.

In each discipline, six pairs of students were selected. Three pairs were males and three pairs were females. In total, twenty-four students were interviewed. These twenty-four students formed four sub-groups namely, *Building Science Boys*, *Building Science Girls*, *Social Studies Boys* and *Social Studies Girls*. Each pair had the same or close to the same university entry score. The following table shows the grouping of the interviewees.

Table 1: Groups of interviewees

	High-performer Group	Mid-performer Group	Low-performer Group
Building Science Boys	One high GPA One low GPA	One high GPA One low GPA	One high GPA One low GPA
Building Science Girls	One high GPA One low GPA	One high GPA One low GPA	One high GPA One low GPA
Social Studies Boys	One high GPA One low GPA	One high GPA One low GPA	One high GPA One low GPA
Social Studies Girls	One high GPA One low GPA	One high GPA One low GPA	One high GPA One low GPA

These twenty-four students were invited for an individual interview to discuss issues about their adjustments to college with reference to the interview plan described earlier in this chapter. All the interviews were conducted in Cantonese and were tape-recorded. The interview data were then transcribed in English for further analysis.

4.3.3 Framework of analysis

To analyze the interview data, a framework was developed based on the constructs of the interview plan. Analysis was made by comparing students'

responses in terms of differences between *discipline of study*, *gender*, *university entry score*, and *academic performance*.

Table 2: Analysis framework for interview data

General profiles of interviewees	- First generation of university entrant - Advanced Level English (ALE) grade - Certificate Level English (CLE) grade - Medium of instruction in Certificate-level and Advanced-level education - University entry score - Grade Point Average - Joined Orientation camp - Worked part-time - Financial support for study
Perceptions of adaptation	- Nature of adaptation problems - Matches and mismatches of expectations of college - Information they wanted to know
Academic adaptation	- Self-rating of academic performance - Perceptions of workload - Differences in secondary school and college learning - Changes in study approaches - Coping strategies - Support for learning - Difficulties identified
Social Adaptation	- Participation in extra-curricular activities - Perceived teaching quality and teacher–student relationships - Student–student relationships
Articulation of academic success	- Goal of university education Indicators of academic success

4.4 Ethical considerations

Ethical considerations for this study comprised two aspects i.e. (a) how the research participants were treated, and (b) how the data were handled.

On the part of participants in all phases of the current study, they were fully informed of the purposes, nature and methods of the research before the fieldwork started. The participants of the focus groups and the survey were invited to take part

in the study via an email invitation, which stated clearly the research goal and purposes. The interview participants were explained the objective of the study and the interview format before the interviews commenced. Secondly, all the participants took part in the study voluntarily. To compensate for their time and effort in taking part in the study, all the focus group and interview participants were given a small souvenir. A lucky draw was offered to the survey participants. In addition, the participants were told that they had the right to withdraw from the study if they did not want to continue and that it would not lead to any stated or implied penalty. Lastly, the participants were assured that the data and the results were to be used solely for research purposes. Neither the data nor the results would become part of the university records and would in no way affect their status of standing.

On the part of data, all survey data were presented in an aggregate manner. No individual identity was disclosed. The access of raw data was restricted to only the investigator and the research assistant concerned.

4.5 Summing up

This thesis has attempted to use a mixed methods design to gain a more thorough understanding of the topic under investigation. For the construction of the instrument, the investigator has drawn on multiple sources of information in the process of development including an established instrument used in the United States and the narrative experiences of the focus group participants.

A limitation to this study is an obvious time gap between the collection of the two data sets; in that the survey data were collected in 2003 while the interview data were collected in 2007. This was due to external circumstances not fully under the control of the investigator. e.g. job change. To strengthen the coherence of the

two data sets, ideally both the survey and the interviews should be administered to the same cohort. As such, those selected survey participants would have the opportunity to amplify or clarify their responses while the investigator would seek verification from the selected participants in the interviews.

Another limitation is that the research was conducted on only one sample. If the research were to be replicated to cross-check the findings obtained from the first study, there would be higher confidence in the generalizability of the findings.

Finally, the administration of the study would have been improved if a debriefing session had been given to the participants to explain why the study was conducted or if the findings of the study had been shared with the participants. This arrangement would increase the participants' knowledge about the issues under investigation, thus improving the educational value of the research.

Chapter 5

Survey Findings

5.1 Introduction

This chapter aims to discuss the findings obtained from the questionnaire survey on the investigation of student transition experiences from high school to high education, as well as the factors affecting students' perceptions of college life. The target respondents were full-time first-year students in two associate degree programmes, namely Building Science and Social Studies. The questionnaire was administered to the sample online at the beginning of the second semester of the 2003–2004 academic year in February 2003. The survey hopes to shed light on students' academic, social, personal-emotional, and overall adjustments to the college environment. Particularly, the survey aims to investigate the following issues:

1. Students' academic adaptation to the college environment;
2. Students' social engagement in college life as manifested by a) pattern of time spent, b) participation in college activities, and c) quality of relationships with peers and teachers;
3. Respondents' self-concept of abilities and perceived development of these abilities after the first semester, as well as the a) correlations between abilities rated lower than the others and self-ratings on personal development, and b) correlations between abilities rated higher than the others and self-ratings on personal development;
4. Underlying patterns of relationships among the aggregated scales representing the indices of college life; and

5. Correlations between students' standing on the background categorical variables and their standing on aggregated scales.

5.2 The sample

The participants of this study were first-year associate degree students from the Department of Building Science (BS) and the Department of Social Studies (SS). A full list of students of these two departments was retrieved from the college's student database. The students were sent an email invitation to complete an online questionnaire. At the time of the survey administration, the target respondents had already completed the first semester in college.

There were 1263 first-year students in these two programmes. As shown in Table 3a, a total of 332 students accepted the invitation finally and completed the questionnaire through a web-based system, giving a response rate of 26%. Among the sampled population, the proportion between Building Science students and Social Studies students was 45% to 55%. Among the survey respondents, the proportion between the two departments was 35% (Building Science) to 65% (Social Studies). That means 21% of the target Building Science sample and 31% of the target Social Science sample answered the questionnaire.

Table 3a: Sampled population and response rate

	Total	*Building Science*	*Social Studies*
Sample	**1263**	*569 (45%)*	*695 (55%)*
Number of Respondents	**332**	*117 (35%)*	*215 (65%)*
Response Rate	**26%**	*21%*	*31%*

A breakdown of the responses by discipline of study and gender is presented in Table 3b. The result suggests that female students in the Social Studies Department had a stronger influence on the data obtained than did the other student groups.

Table 3b: Response rate by discipline of study and gender

Total Respondents = 332		Count	Percentage
Building Science	Female	47	14.1
	Male	70	21.1
Social Studies	Female	147	44.2
	Male	68	20.5
	Total	332	100

This survey was conducted on a voluntary basis. As such, the response rate was not expected to be high. Moreover, the college featured in the current study regularly administers numerous surveys to students to collect their feedback on teaching and other issues. As expected, the students possibly suffered from questionnaire fatigue and felt less motivated to answer a questionnaire survey. As the response rate was less than one-third of the target population, there was a possibility of sampling bias. Students who responded to the survey were more likely to be problem free compared with those who did not respond, as they were interested and found the time to answer the questionnaire. Students who did not respond to the survey probably had no interest in the topic under investigation or did not believe that a survey of this kind would have any practical value. Ideally, the nonresponse error should be verified by comparing the profiles of the respondents and the non-respondents. If no significant difference between the two groups were identified, then the sample would be more likely to represent the target population. However, a low response rate does not necessarily invalidate the findings of the survey. It may only indicate a risk of lower accuracy ("Response rate," 2011). As this survey was intended to be exploratory in nature, a response rate of three hundred students should be considered acceptable to shed light on issues worthy of discussion and further investigation.

A demographic overview of the survey respondents is given in Table 4. About two-thirds of the respondents were from the Department of Social Studies and

one-third was from the Department of Building Science. Close to 63% of the respondents were aged between 19 and 20 years, and 43% of them had part-time employment. The proportion between female and male students was 58% to 42%.

Table 4: Demographic characteristics

Total Respondents = 332		Percentage
Discipline	Building Science	35.2
	Social Studies	64.8
Gender	Female	58.4
	Male	41.6
Age	19–20 years of age	62.7
	21–22 years of age	28.9
	Over 22 years of age	8.4
Working part-time	Yes	43.4
	No	56.6

5.3 Results

This section aims to discuss the results of the survey. It will begin with a summary of the characteristics of the respondents, followed by a discussion of the survey findings with reference to the college adaptation framework of Baker and Siryk (1989) described in Chapter 2. It will then turn to discuss the ANOVA results which aim to shed light on the factors affecting students' perceptions of their college life.

5.3.1 Characteristics of the respondents

The survey collected a number of background variables from the respondents, including students' academic grades and their responses to several items representing satisfaction with the college environment. Students' academic scores were derived from three sources, including a) their secondary school leaving examination grades, b) their university entrance examination grades, and c) their grade point average (GPA) after the first semester. Details are given in Table 5.

Table 5: Students' academic grades

Total Respondents = 332							
Students' secondary school leaving examination grades							
			Percentage of students responding				
			Distinction (A)	Credit (B/C)		Pass (D/E)	Fail (F/U)
Advanced Level English (ALE)			0.3	2.4		75.9	21.4
Advanced Level Chinese (ALC)			0.3	8.7		80.7	10.2
Students' university entrance examination grades							
Certificate Level English (CLE)			2.1	32.2		63.9	1.8
Certificate Level Chinese (CLC)			0.3	9.3		89.2	1.2
Certificate Level Mathematics (CLM)			2.1	58.4		36.7	2.7
Grade Point Average							
	(4.3–3.7)	(3.6–3.4)	(3.3–2.7)	(2.6–2.3)	(2.2–1.7)	(1.6–1.1)	(1)
GPA	A	A-	B	B-	C	C-	D
	4.2	22.6	54.0	13.6	4.5	0.90	0.3

As revealed in Table 5, the students' Certificate Level English (CLE) grades, was better than the grades at the advanced level. About 34% of students obtained a "credit" or above in their CLE examination, but less than 3% were able to achieve such result in the Advanced Level English (ALE) examination, in which the majority (76%) only received a "pass." This finding indicates that most of the sampled students had fair English language standards. More than half of the sample (58%) had a reasonably good entry grade (B/C) in Mathematics at the Certificate Level Examination. As for Chinese language, most of the sample received a "pass" grade in both the Certificate Level (90%) and the Advanced Level (81%) examinations.

The sample's GPA indicates that the majority of the respondents performed reasonably well in their first semester of study. About half of them (54%) were graded B with smaller percentages were graded A (4.2%), A- (22.6%) and B- (13.6%). Students graded C or below accounted for about 5% of the sample. However, only those students with a GPA higher than 3.3 were considered for a government-funded top-up degree programme.

Aside from the academic grades, students were asked to respond to the items listed in Table 6. These items aim to reveal student satisfaction with their study

programme, as well as the college environment at the outset. This set of items, together with the students' academic grades, served as the background variables assisting in the understanding of student responses to other dimensions of the questionnaire.

Table 6: Background variables

Total Respondents = 332		Percentage
Students intending to enrol for a degree programme	Yes	90.0
	No	10.0
Students indicating enjoyment of campus life	Yes	75.9
	No	24.1
Students indicating that they would make the same choice of study programme	Definitely yes	19.3
	Probably would	54.5
	Probably not	16.0
	Definitely not	6.0
	Don't know	4.2
Students' rating of teaching quality	Excellent	4.2
	Good	56.0
	Acceptable	37.3
	Poor	2.1
	Very poor	0.3

As indicated in Table 6, 90% of the sample intended to enrol for a degree programme; 76% of them reported that they enjoyed campus life; and 74% said that they would either definitely or probably choose the same programme they were attending if they could make their college choice all over again. More than 60% of the sample considered the teaching quality to be either "excellent" or "good". Most of the respondents were generally satisfied with their college life, although a large minority of 24% reported the opposite; 26% reported that they might not study the same programme if given a second choice; 37% considered the teaching quality to be acceptable; and 2% considered the teaching quality to be poor.

5.3.2 Academic adaptation to the college environment

The first scale of Baker and Siryk's adaptation framework relates to students' adjustments to the academic environment of the college. The following discussion aims to shed light on students' academic adjustments in terms of learning difficulties and barriers, English language ability, preferred learning methods, sources of help, and motivation.

(i) Difficulties and barriers

Tertiary students today are criticized to be not as well prepared for tertiary study as students in the past. Many of them rely on notes provided by teachers, and they cannot adopt an independent approach to studying. In college, students are expected to be more independent and to have some essential study skills, such as researching and note taking in order to handle the academic demands. Table 7 presents the types of learning difficulties identified by the respondents. Feeling overwhelmed by course work was considered to be a major difficulty. About 17% of the respondents said that they were frequently overwhelmed by coursework; 45% said that they felt the same occasionally. About 4% said that they frequently had difficulty in following lectures; and 33% indicated that they came across the same difficulty occasionally. Around 2% reported that they frequently failed to complete their homework on time, and 8% said that they did the same occasionally. A small number of respondents (1%) indicated that they frequently missed class to meet an assignment deadline, and 10% said that they did the same occasionally. About 10% of the respondents reported that they frequently felt bored in class, and 37% said that they felt the same occasionally.

Table 7: Learning difficulties

Total Respondents = 332	Percentage of students responding			
	Frequently	Occasionally	Seldom	Not at all
Feel overwhelmed by coursework/assignments	16.6	45.3	33.5	4.5
Find it difficult to follow lectures	3.9	32.9	52.9	10.3
Fail to complete homework on time	1.8	7.9	36.3	54.1
Miss class to meet an assignment deadline	1.2	10.2	33.4	55.1
Feel bored in class	9.9	37.3	48.5	4.2

The survey also asked the respondents to identify the barriers to their learning. The responses are presented in ranked order in Table 8. Overall, "time management skills" was the most selected barrier to learning. Around 26% definitely regarded it as a barrier, and 56% considered it as a possible barrier. The second most selected barrier was "study skills," which was rated by 15% and 65% of respondents as a definite barrier and a possible barrier, respectively. "Motivation" came in third, and was followed by "language ability". Fewer respondents considered physical resources, such as library facilities, computing facilities, or class size, as barriers to learning. Conversely, more than 40% of the sample reported that these physical provisions did not pose any problems at all.

Table 8: Factors identified as barriers to learning

Total Respondents = 332	Percentage of students responding		
	Definitely	Probably	Not at all
Your time management skills	26.0	55.9	18.1
Your study skills	14.8	65.1	20.2
Your motivation	25.5	52.7	23.2
Your language ability	23.5	51.8	24.7
Inadequate computing facilities	18.5	39.7	41.8
Insufficient library facilities	18.1	38.0	43.8
Class size is too large	18.4	39.3	42.4

It is common for universities in Hong Kong to offer courses designed to enhance students' learning skills with the aim of empowering them as independent learners. The college featured in the current study offers such provision, with a three-

credit-unit course on learning skills open to all students, including those in associate degree programmes. It aims to help improve students' learning skills and attitude. However, most of the respondents (78%) indicated that they were either not taking this course or had no plans of taking it in the future (Table 9). The college also offers time-management training workshops through the student development services, but only a small number of students made use of this facility.

Table 9: Percentage of students taking or planning to the take the learning enhancement course

Total Respondents = 332	Percentage
Not taking the learning enhancement course but plans to take it in the future	22.0
Not taking the learning enhancement course and has no plans of taking it in the future	78.0

This finding leads to an interesting observation that many students know the difficulty they face. Take study skills for example. About 15% of the respondents (Table 8) considered study skills as a major learning barrier, while 65% considered it as a possible learning barrier, but most of them did not take any action to improve in this area. Several questions were raised: Did students know about the availability of the course? Did they doubt its value? Did they think that the course could serve its purpose?

(ii) Preferred medium of instruction (MOI) and English language ability

English is the official MOI in the college featured in the current study. However, in reality, the medium used may depend on the preference of students and the teaching staff. The mixed code of using both English and Cantonese is not uncommon. In view of this situation, students were asked to respond to a set of items that indicate their language preference for use in different teaching contexts, including lectures, seminars/laboratory sessions, tutorials, and student presentations. As shown in Table 10, none of the three options of English, Cantonese, and English

plus Cantonese gained the majority of votes. More than 60% of the respondents preferred lectures, seminars/laboratory sessions, and tutorials to be conducted bilingually in English and Cantonese. Almost a quarter of students preferred tutorials to be conducted in Cantonese. This result implies that students' English listening abilities may not be good enough for them to follow adequately the lectures or tutorials delivered in English.

Table 10: Language identified as appropriate for different learning situations

Total Respondents = 332	Percentage of students responding		
	English	Cantonese	English + Cantonese
Lecture	25.7	5.7	68.6
Seminar/Laboratory session	18.0	17.4	64.6
Tutorial	12.3	22.9	64.8
Student presentation	46.1	12.0	41.9

As shown in Table 8, language ability was considered to be a major or a possible learning barrier by 24% and 52% of the respondents, respectively. That means more than three quarters of the respondents faced the problem of language proficiency. Their responses are further confirmed by their self-assessment of their English language ability as shown in Table 11. Close to one-third of the respondents (32%) regarded their English language ability as "below average" or "much below average". After one semester in college, half of the respondents did not find any improvement in their English language proficiency, and 13% even regarded their English ability to be poorer. Responses to the three inter-related items of "communication skills in writing," "public speaking skills", and "reading speed/comprehension," are also worth noting. Similar to "English language ability", half or more than half of the respondents reported no improvement in "communication skills in writing" and "reading speed/comprehension" after the first semester. Conversely, more than half of the respondents (52%) reported that their public speaking skills became stronger or much stronger after the first semester in

college. This result may be caused by the fact that students gain more practice by giving college presentations in English. This finding also explains why 46% of the sample indicated that they preferred student presentations to be conducted in English (Table 10).

Table 11: Self-concept and personal development of one's academic-related skills compared with those of an average person in the same age group

Total Respondents = 332	Percentage of students responding					
	Self-concept			Personal Development		
	Above average/ Much above average	Average	Below average/ Much below average	Stronger/ Much stronger	No change	Weaker/ Much weaker
English language ability	15.4	52.9	31.7	36.4	50.6	12.9
Communication skills in writing	19.9	53.3	26.8	29.8	57.2	12.9
Public speaking skills	23.5	49.7	26.8	51.8	42.2	6.0
Reading speed/ Comprehension	22.3	58.1	19.6	31.4	60.1	8.5
Mathematical skills	32.3	43.2	21.0	12.7	71.7	15.4
Computer skills	29.5	44.7	25.7	57.7	38.4	3.9
Study skills	16.6	68.3	15.1	37.6	59.1	3.3
Ability to learn on you own effectively	21.4	65.9	12.7	45.2	52.1	2.7

The college featured in the current study provides remedial English courses. However, 81% of the respondents were not required to take such courses (Table 12). This finding shows the gap between the needs of students and the actual assistance they receive for learning improvement in college.

Table 12: Percentage of students taking English enhancement courses

Total Respondents = 332	Percentage
Yes	19.3
No	80.7

(iii) Effective learning methods

When the respondents were asked to identify the most effective learning methods listed in Table 13, "individual/small group teaching" obtained the most votes. About 21% rated it as very effective, and 60% rated it as effective. The second

most popular method was “real world example and case study.” Close to one-third of the respondents voted this method as very effective, and 47% considered it to be effective.

Table 13: Effective learning methods identified by the respondents

Total Respondents = 332	Percentage of students responding			
	Very effective	Effective	Quite effective	Not effective at all
Individual/small group teaching	21.1	59.9	17.8	1.2
Real world examples and case studies	29.5	46.7	20.8	2.4
Group work	15.7	51.5	26.8	5.7
Individual work	16.6	49.4	32.2	1.8
Discussing work with staff members outside of class	16.6	45.5	31.0	6.3
Class discussions	12.0	47.9	35.8	4.2
Class presentations	14.8	43.7	32.8	8.7
Visits and fieldtrips	19.9	36.7	34.9	8.1
Work placement	19.3	36.7	30.1	13.6
Discussing work with other students outside of class	9.0	41.0	41.6	8.1
Large group lecturing	4.8	27.1	54.5	13.6
Online learning	2.4	18.4	52.7	26.2

The learning methods which were voted by more than 50% of the respondents as effective or very effective are presented in ranked order in Table 14. Only “large group lecturing” and “online learning” did not make the list. Conversely, as shown in Table 13, 26% of the sample found online learning and 14% found large group lecturing not effective at all. This finding raises an interesting issue about the present teaching delivery method in universities. As all know, large group lecturing is the main delivery mode in universities. Huge investments have been provided to universities to create hi-tech campuses equipped with very sophisticated technological facilities and to develop e-materials to facilitate student learning. In the 1998 policy address, the government decided to invest HK$630 million to promote the further use of information technology in education, which questions whether funds are allocated properly to address the needs of students.

Table 14: Learning methods identified by more than half of the respondents as very effective or effective

Total respondents = 332	Percentage
	Very effective or Effective
Individual/small group teaching	81.0
Real world examples and case studies	76.2
Group work	67.2
Individual work	66.0
Discussing work with staff members outside of class	62.1
Class discussions	59.9
Class presentations	58.5
Visits and fieldtrips	56.6
Work placement	56.0
Discussing work with other students outside of class	50.0

(iv) Sources of help

When students face difficulty in studying, from whom do they seek help? As indicated in Table 15, the majority (92%) sought help from their classmates, and 74% requested assistance from their subject teachers. The third popular option was seeking help from friends (62%) or solving the problems themselves (61%). It should be noted that only one-third of the respondents made use of the structural provisions of the college such as year tutors. The number of students who sought help from mentors or counselors was even smaller.

Table 15: Sources of help sought by the respondents when having difficulties in studying

Total Respondents = 332	Percentage
Classmates	91.6
Subject teachers	73.8
Friends	61.7
Try to solve difficulties on their own	60.5
Year tutors	35.5
Senior students	17.2
Brothers/Sisters	16.6
Mentors	9.0
Parents	8.7
Counselors	3.3

(v) Motivation

Baker and Siryk investigated academic adaptation from four angles. The first one is related to one's motivation. Similar to the results found in the focus groups discussed in Chapter 3, the survey findings show that the respondents were certainly motivated to do well in their course, with 90% indicating that they would enrol in a degree programme (Table 6). For students serious about securing a place in the top-up degree programme funded by the government, they need to obtain a GPA equivalent to at least a grade of A-.

At the outset, one may expect that student motivation may be mainly instrumental rather than intrinsic when it comes to their study programme, as university education is regarded as a ticket to a high-paying and/or a high-status job. Among all the reasons for receiving a university education, 95% of the sample unsurprisingly indicated "to gain an academic/professional qualification" as a very important or an important reason, followed by "to develop talents and abilities" (90%), and "to receive training for a specific job" (86%). "To study a field that really interests you" (80%) also had a strong influence on students' choice of academic programme (Table 16).

Table 16: Reasons considered important in entering tertiary education

Total Respondents = 332	Percentage of students responding			
	Very important	Important	Quite important	Not important
To gain academic/ professional qualification	59.8	35.6	4.5	--
To develop talents and abilities	40.7	48.8	9.6	0.9
To receive training for a specific job/profession	41.3	44.3	12.7	1.8
To study a field that really interests you	39.8	40.4	16.3	3.6
You find your qualifications restricting your search for jobs of promising prospects	35.6	39.0	19.6	5.7
To experience university life	33.4	40.1	20.5	6.0
To contribute more to society	24.7	45.7	26.8	2.7
To fulfill parents' expectations	14.8	39.0	32.6	13.6
You find it still too early to join the work force at your age	11.1	33.4	25.9	29.5

However, contradictory results were observed in the current study. When respondents were asked to identify the barriers pertinent to their learning, "motivation" was identified by 26% as a barrier and 53% as a possible barrier (Table 8). Why were students unmotivated? Almost all of them had the intention to complete a degree, but more than three quarters of the respondents considered "motivation" to be a barrier to their study. Does this mean that students wanted to obtain a degree but were in programmes that were not of their interest? Is the lack of motivation caused by students' inaccurate or insufficient knowledge on the study programme they were attending?

Comparatively, the more affective factors, such as "to experience university life" and "to contribute more to society", were considered less important by students. Only 15% of the sample selected "to fulfill parents' expectations", and 11% selected "too early to join the work force" as their major reasons for entering university.

5.3.3 Students' social engagement in college

Baker and Siryk's social adjustment scale measures how successfully a student copes with interpersonal-societal demands. The scale has four sub-scales, namely the extent and success of social activities and functioning in general, involvement and relationships with other people on campus, dealing with social relocation and being away from home, and significant persons and satisfaction with the social aspects of the college.

The third dimension of Baker and Siryk's social adjustment scale has little effect on Hong Kong students because most of the students are commuters as Hong Kong is a compact city. When students first enter college, they have to cope with the structural changes and the way they are organized into groups. In high school, they are grouped by class, whereas in college, they are usually grouped according to their respective academic programme. However, under such arrangement, relating themselves to a clearly identifiable group may not be easy for students because each student in an academic programme may have his/her own choice of core and elective courses. Therefore, each student's timetable is different from one another. Students who can identify themselves with a group are more ready to adapt, and those who cannot, may need to take some time to overcome this change, especially those who do not have any high school friends admitted to the same college (McInnis & James, 1998).

(i) Patterns of time spent

As revealed in Table 17, which shows respondents' extent of participation in various college activities in a typical week, attending lectures and tutorials took up most of their time. About 55% of students spent 16 to 20 hours on

lectures/seminars/tutorials/laboratory sessions, and 16% spent even more than 20 hours on these activities.

Table 17: Time spent during a typical week

Total Respondents = 332		Percentage of students responding					
		none	1-5 hrs	6-10 hrs	11-15 hrs	16-20 hrs	over 20 hrs
Study - related activities	Lectures/seminars/tutorials /laboratory sessions	--	2.4	11.4	15.1	54.8	16.3
	Individual academic work/study	1.8	31.0	29.8	20.2	8.4	8.7
	Group academic work/study	1.5	41.0	34.0	13.3	4.5	5.4
Student activities	Participating in student societies/activities	36.1	47.3	8.8	4.8	0.9	2.1
	Organizing student societies/activities	62.5	27.5	5.4	1.8	0.9	1.8
Pastimes/ Hobbies	Socializing with friends	2	40	35	13	3	7
	Listening to music	9.6	44.9	22.0	10.2	5.1	7.8
	Shopping	13.0	57.5	17.5	6.9	1.5	3.3
	Exercising/Sports	23.2	57.2	12.3	4.2	1.5	1.5
	Watching TV/video	5.7	35.8	33.1	13.6	6.6	5.1
	Cinema/Concert	34.6	51.8	7.2	3.9	0.6	1.8
	Reading for pleasure	22.9	53.6	16.9	3.6	0.9	1.8
	Playing video/computer games	31.6	42.5	11.7	10.2	0.9	3.0
	ICQ/Internet chat room	13.9	38.0	19.6	15.7	3.6	9.3
	Navigating WWW/Internet	2.4	28.0	27.1	21.4	6.0	13.9

Moreover, 36% of the respondents indicated that they did not spend any time on student societies/activities. An even a larger proportion of students (63%) reported that they did not spend any time on organizing student societies and activities. These figures warrant close attention.

The time spent pattern of the students indicates that student engagement in college is largely restricted to academic activities. As shown in Table 18, about two-thirds of the students declared that they were not a member of the Student Union or belonged to any other student clubs or societies. More than half of them (56%) did not join any activities organized by the Student Union, clubs, or societies; 75% of the respondents did not join any programmes/activities organized by the university services; and 84% of the respondents did not take part in the Student Mentoring

Scheme. These findings imply that students' integration into the university was mainly through academic activities. Their involvement in the social environment of the university was very limited.

Table 18: Percentage of students participating in student activities or programmes organized by the university services

Total Respondents = 332		Percentage
Students being a member of the Student Union or any other student clubs or societies	Yes	33.9
	No	66.1
Students joining activities organized by the Student Union, clubs, or societies	Yes	43.7
	No	56.3
Students joining programmes/activities organized by the Student Development Services	Yes	25.2
	No	74.8
Students joining the Student Mentoring Scheme	Yes	16.3
	No	83.7

The survey also reveals that students' interest was tied to individual or virtual activities. Among all other activities, "navigating WWW/Internet" is the one on which 20% of students spent more than 16 hours per week, followed by "ICQ/Internet chat room" (13%).

(ii) Quality of relationships with peers and teachers

Whether a student can integrate into the college environment largely depends on how they perceive their relationships with other people on campus. This perception is what the second dimension of Baker and Siryk's social adjustment scale intends to measure. In the current survey, 93% of the respondents indicated that they were able to make new friendships (Table 19), and 65% of the respondents rated their relationships with other students as good or very good. Moreover, 34% of the students considered their relationships with other students to be "okay" and a very small number of respondents (1%) rated their relationships with other students as poor.

Table 19: Rating of relationships with other students

Total Respondents = 332		Percentage
Able to make new friendships	Yes	93.0
	No	7.0
Rating of relationships with other students	Very good	13.9
	Good	50.9
	Just okay	34.0
	Poor	0.9
	Very poor	0.3

The survey also reveals that students' relationships with teachers were apathetic. Close to two-thirds of the respondents (62%) said that they seldom chatted with their teachers outside class time, and 12% said that they never did (Table 20). Similarly, 56% seldom and 11% never consulted their teachers after class. Only 3% to 4% of the respondents said that they had frequent interactions with their teacher; 11% had no contact with their teachers at all after class. This finding shows that students' relationships with teachers were very remote. Staff–student interaction was limited and confined to mainly classroom activities.

Table 20: Frequency of interaction with the teaching staff

Total Respondents = 332	Percentage of students responding			
	Frequently	Occasionally	Seldom	Not at all
Chatted with the teaching staff outside of class	3.3	23.6	61.6	11.5
Asked a teacher for advice after class	3.9	28.8	56.1	11.2

As far as their overall satisfaction with the environment is concerned, 76% of the respondents indicated that they enjoyed their campus life, whereas 24% suggested the opposite (Table 6). What made these students so unsatisfied with their campus life? This feedback is worthy of further investigation, as the size of this group constitutes one quarter of the respondents, which is large enough to warrant attention.

5.3.4 Personal-emotional adaptation

(i) Self-concept of one's abilities

Baker and Siryk's personal-emotional adaptation scale focuses on students' intra-psychic state and measures whether students are under stress and have any somatic problems. The scale looks at both psychological and physical well-being of students. In the current survey, the focus was on students' self-evaluation of themselves. As discussed in the introductory chapter, associate degree students are often regarded by the others, or consider themselves as, less successful or competent academically compared with their degree counterparts. Many associate degree students may feel inferior in terms of their education career. To measure how the associate degree students perceive their abilities in comparison with other people of their age, students were asked to rate their own abilities identified on a list according to a 5-point scale, which ranges from "much above average" to "much below average" and then to rate the improvement they perceived they had made after one semester in college. The abilities identified were grouped into five domains: academic-related skills, generic skills, self-management skills, people skills, and knowledge. Table 21 presents students' self-ratings of their abilities in these five sets of skills/knowledge.

Table 21: Self-concept of one's abilities

Total Respondents = 332		Percentage of students responding				
		Much above average	Above average	Average	Below average	Much below average
Academic-related skills	English language ability	0.9	14.5	52.7	28	3.6
	Communication skills in writing	1.5	18.4	53.3	23.8	3.0
	Public speaking skills	3.0	20.5	49.7	22.6	4.2
	Reading speed/comprehension	1.8	20.5	58.1	17.8	1.8
	Mathematical skills	7.5	27.1	43.1	19	3.0
	Computer skills	4.8	24.7	44.6	22.6	3.0
	Study skills	2.1	14.5	68.1	14.2	0.9
	Ability to learn on your own effectively	2.7	18.7	65.7	12.7	0.3
Generic skills	Creativity	5.7	29.5	45.2	19	0.3
	Ability to think critically	4.5	33.1	48.5	13.6	
	Problem-solving skills	2.7	33.7	56	7.2	0.3
	Organizational skills	3.3	32.8	51.8	11.1	0.9
Self-management skills	Ability to work independently	5.1	44	41.9	9.0	---
	Ability to adapt to change	9.0	42.8	40.4	7.5	0.3
	Time management skills	2.4	22.6	43.4	27.4	4.2
	Self-confidence	4.2	27.4	50.3	16.6	1.5
	Persistence	6.3	30.4	46.7	16.3	0.3
People skills	Ability to work in a team	4.8	43.4	45.5	5.7	0.6
	Leadership ability	4.8	29.5	41.6	22	2.1
	Interpersonal skills	4.8	36.1	48.5	9.9	0.6
Knowledge	Common sense/General knowledge	4.5	32.5	56.9	6.0	---
	Current affairs knowledge	2.4	22.6	55.1	18.7	1.2

Under the domain of academic skills, as indicated in Table 21, "English language ability" (32%), "communication skills in writing" (27%), and "public speaking skills" (27%) were the three skills in which the sample felt less confident, as one-third or close to one-third of the sample rated their abilities in these three areas as below or much below average. More respondents were satisfied with their "mathematical skills" (35%) and "computer skills" (30%), as one-third or more than one-third of the sample rated their abilities in these two areas as better than those of others. As regards "study skills" and "ability to learn on their own effectively", two-thirds of the respondents rated their abilities at the average level.

The respondents seemed to be more satisfied with their generic skills. As regards the four skills identified, more than one-third of the respondents rated themselves as better than did others.

Under the domain of self-management skills, “ability to adapt to change” (52%) and “ability to work independently” (49%) were the two abilities that the respondents were most confident about themselves, as they were rated by about half or more than half of the sample as above average. More than one-third of the respondents rated their “self-confidence” (32%) and “persistence” (37%) as above average. Under this domain, “time management skills” was rated as the lowest by the sample, as 32% considered their “time management skills” to be below average.

As regards people skills, 48% of the sample rated their “ability to work in a team” and 41% of the sample rated their “interpersonal skills” as stronger than those of others.

In the domain of knowledge, 37% of the sample rated their common sense/current knowledge as above average, and 25% considered their knowledge in current affairs to be better than that of others in the same age group.

These statistics show that “time management skills”, “English language ability” and the other inter-related language skills, including “communication skills in writing” and “public speaking skills” were the areas that one-third of the sample were not satisfied with. In general, the respondents rated academic skills the lowest. They were more satisfied with their people skills, generic skills and self-management skills aside from time management skills. These findings suggest that many respondents, although they saw room for improving their skills in different aspects, did not think they were less competent in terms of ability.

(ii) Self-rating of one's development

The same list of abilities was used to measure how the respondents perceived the degree of progress they had made after they commenced higher education for one semester. A 5-point scale ranging from "much stronger" to "much weaker," with a mid-point denoting "no change," was used to measure their perceptions.

Table 22: Self-rating of one's development

Total Respondents = 332		Percentage of students responding				
		Much stronger	Stronger	No change	Weaker	Much weaker
Academic-related skills	English language ability	1.5	34.9	50.6	12.0	0.9
	Communication skills in writing	1.5	28.3	57.2	12.0	0.9
	Public speaking skills	3.9	47.9	42.2	5.4	0.6
	Reading speed/comprehension	1.8	29.6	60.1	8.2	0.3
	Mathematical skills	1.2	11.5	71.7	13.6	1.8
	Computer skills	5.7	52.0	38.4	3.3	0.6
	Study skills	1.8	35.8	59.1	3.3	0.0
	Ability to learn on your own effectively	2.7	42.5	52.1	2.7	0.0
Generic skills	Creativity	3.9	33.7	58.1	3.6	0.6
	Ability to think critically	4.8	52.3	41.4	1.5	0.0
	Problem-solving skills	3.0	57.2	38.0	1.5	0.3
	Organizational skills	3.0	56.3	37.0	3.3	0.3
Self-management skills	Ability to work independently	4.2	54.2	39.8	1.8	0.0
	Time management skills	5.7	32.8	55.1	6.3	0.0
	Self-confidence	4.5	39.9	48.9	6.6	0.0
	Persistence	5.1	29.6	60.4	4.5	0.3
	Ability to adapt to change	3.3	46.4	47.6	2.7	0.0
People skills	Ability to work in a team	6.3	61.7	29.5	2.4	0.0
	Leadership ability	1.8	39.0	55.3	3.6	0.3
	Interpersonal skills	3.9	49.7	42.2	4.2	0.0
Knowledge	Common sense/General knowledge	1.5	67.2	30.1	0.9	0.3
	Current affairs knowledge	2.1	57.4	38.7	1.8	0.0
	Subject knowledge	12.7	67.2	18.1	1.5	0.6

About 80% of the respondents reported gains in the "knowledge domain" This finding indicates that most of the respondents felt they acquired knowledge in the first six months of college. The second and third popular items that received high

ratings from the respondents were “common sense” (69%) and “ability to work in a team” (68%) respectively. Table 23 lists the areas that half or more than half of the respondents reported improvement.

Table 23: Skills reported “improvement” by half or more than half of the respondents

Total Respondents = 332		Percentage
Academic-related skills	Computer skills	57.5
	Public speaking skills	51.8
Generic skills	Problem-solving skills	60.2
	Organization skills	59.3
	Ability to think critically	56.9
Self-management skills	Ability to work independently	58.4
People skills	Ability to work in a team	68.1
	Interpersonal skills	53.6
Knowledge	Subject knowledge	79.8
	Common sense	68.7
	Current affairs knowledge	59.3

In summary, more than half of the respondents reported improvement in two out of eight “academic skills”, three out of four “generic skills”, one out of five “self-management skills”, two out of three “people skills”, and all three types of “knowledge” identified. Among these five skill domains, knowledge is the domain that most of the respondents reported improvement. Conversely, fewer respondents considered that they improved their academic skills after one semester in college. Moreover, 13% of the respondents reported that they became poorer in “English language ability” and “communication skills in writing”, and 15% found their “Mathematical skills” to be poorer (Table 22). As shown in Table 24, most of the abilities that half or more than half of the respondents reported “no improvement” are under the domain of academic skills. “Time management skills” and “English language ability” in which more than one-third of the respondents found themselves to be poorer compared with the others (Table 21), appeared in Table 24 again. This finding implies that the students who had problems with these two areas actually

made no improvement after one semester in college. To these students, the problems remained.

Table 24: Skills reported "no improvement" by half or more than half of the respondents

Total Respondents = 332		Percentage
Academic-related skills	Mathematical skills	71.7
	Study skills	58.7
	Reading speed/comprehension	59.9
	Communication skills in writing	57.2
	Ability to learn effectively on your own	52.1
	English language ability	50.6
Generic skills	Creativity	58.1
Self-management skills	Persistence	60.2
	Time management skills	55.1
People skills	Leadership ability	55.1

Some of the skills identified above, such as "study skills", "time management skills", and "English language ability" were also identified as learning barriers, as shown in Table 8.

(iii) Correlations between self-concept and perceived development

As regards students' self-ratings of abilities and their evaluation of their development, Table 25 reports the correlations between the two sets of aggregated Self-concept and Personal Development scales.

Table 25: Correlation between self-concept and perceived personal development

Correlations

		Self-concept	Personal Development
Self Concept	Pearson Correlation	1	.804**
	Sig. (2-tailed)		.000
	N	332	332
Personal Development	Pearson Correlation	.804**	1
	Sig. (2-tailed)	.000	
	N	332	332

**Correlation is significant at the 0.01 level (two-tailed).

The correlation between the two sets of aggregated variables was very high. The result leads to two interesting questions:

Question 1: What are the correlations between abilities perceived lower than those of others and self-ratings on personal development?

Question 2: What are the correlations between abilities perceived higher than those of others and self-ratings on personal development?

To answer these questions, two sets of categories were created corresponding to respondents' standing on one standard deviation (SD) or two SDs above or below the mean responses on the two aggregated scales of Self-concept and Personal Development. These two categorical variables are labeled *Self-concept Classified* and *Personal Development Classified*. These variables were then cross-tabulated to investigate the pattern of distribution between the two variables. The results in Tables 26 and 27 indicate that there were significant correlations between self-concept and perceived personal development. Detailed reading of the results in Table 26 indicates that 43 out of 71 respondents at -2SDs on Self-concept Classified domain remained at -2SDs or -1SD on the Personal Development Classified domain. Moreover, 46 out of 67 respondents at +2SD on the Self-concept Classified domain remained at +1SD or +2SDs on the Personal Development Classified domain. Similar patterns were also observed at other SD levels. Thus, answers to the two questions posed should be positive. That is, respondents who had lower self-concept also reported lower personal development, and vice versa.

Table 26: Cross-tabulation results

Self-concept * Personal Development Cross-tabulation

Count

		Personal Development				
		-2SD	-1SD	+2SD	+1SD	Total
Self-concept	-2SD	18	25	22	6	71
	-1SD	10	24	25	5	64
	+2SD	23	45	43	18	129
	+1SD	5	16	35	11	67
Total		56	110	125	40	331

Table 27: Results of chi-square tests

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-square	17.392[a]	9	.043
Likelihood Ratio	17.905	9	.036
Linear-by-Linear Association	9.759	1	.002
N of Valid Cases	331		

a. 0 cells (.0%) have an expected count of less than 5. The minimum expected count is 7.73.

5.3.5 Attachment to institution/Overall adaptation

The attachment dimension of Baker and Siryk's model measures students' feelings about their degree of satisfaction with, being in college in general, as well as their feelings about, or their degree of satisfaction with, a particular institution in which the student is currently enrolled.

As shown in Table 6, about 76% of the students indicated that they enjoyed campus life. Moreover, 19% of the respondents said that they would definitely and 55% said that they would probably choose the same programme if they could make their college choice all over again. These responses imply that most of the respondents enrolled in a programme in which they were interested. These responses are supported by the data presented in Table 28 about the choice of programme to which the sample was admitted. About 40% of the respondents indicated that they were accepted in their first choice programme. Another 20% of the respondents were able to enrol in a second or third choice programme. However, the remaining students, especially those admitted to the programme of their 15th to 25th choice (10%), could be under a programme in which they were not interested. It is highly probable that these students might not be well attached to the institution because of an unsatisfactory programme choice.

Table 28: Choice of study programme admitted

Total Respondents = 332	Percentage
1st	39.8
2nd	10.8
3rd	9.9
4th-6th	16.0
7th-10th	9.0
11th-14th	4.5
15th-25th	9.9

Students' reasons for selecting academic programmes were examined further. The results are shown in Table 29. "Being interested in the programme" was rated by 59% of the respondents as a very important criterion when selecting a programme of study, followed by "the programme offers good career prospects", which was rated by 32% of the respondents. These results suggest that a motive for enrichment may outweigh other instrumental purposes. If the students underwent a programme they were not interested in, then it was highly probable that their attachment to the institution would be undermined. As such, 24% of the sample indicated that they did not enjoy the campus life (Table 6).

Table 29: Reasons for selecting a study programme

Total Respondents = 332	Percentage of students responding			
	Very important	Important	Quite important	Not important
Being interested in the programme	58.7	34.3	5.1	1.5
Having the ability to do well in the programme	29.5	55.1	13.9	1.5
The programme offers good career prospects	32.2	40.7	22.9	3.9
The programme has a good academic reputation	21.1	42.8	28	7.8
Public examination results	29.5	39.8	23.8	6.9

5.3.6 Factors influencing the aggregated scales derived in the study

Apart from examining students' adaptation to college study based on Baker and Siryk's adaptation model, another goal of this survey is to investigate the factors affecting the aggregated scales, which represent important dimensions of college life.

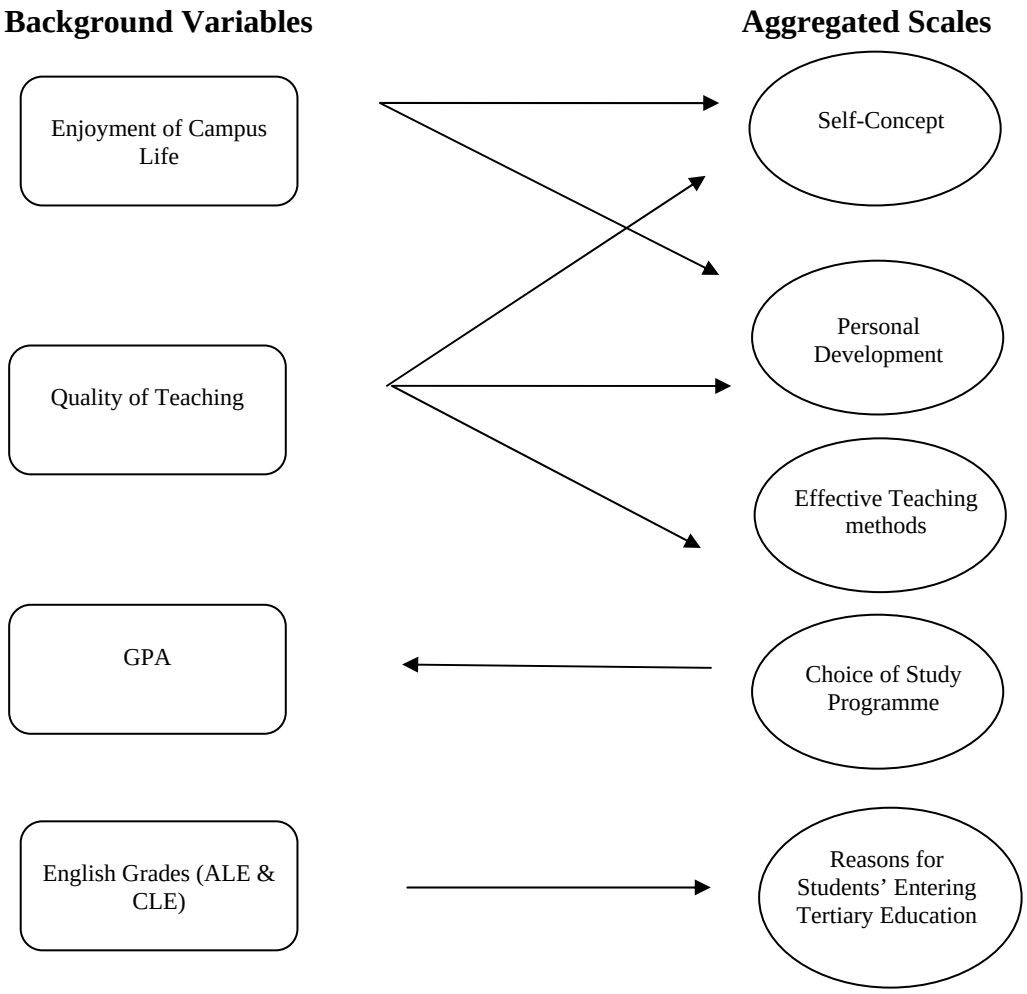
The analysis involved a series of ANOVA undertaken with the background variables, including a) five secondary school leaving examination and university entrance grades, b) grade point average (GPA), c) enjoyment of campus life, and d) quality of teaching as factors and the nine aggregated scales as independent variables. The aggregated scales were *Self-concept, Personal Development, Time Spent, Frequency in Learning Activities, Effective Learning Methods, Barriers to Learning, Reasons for Entering Tertiary Education, Choice of Study Programme* and *Social Environment.* The results are summarized in Table 30. The ANOVA results reported here should be interpreted as the results of regression, with the aggregated scales as independent variables and Advanced Level English (ALE), Advanced Level Chinese (ALC), Certificate Level English (CLE), Certificate Level Chinese (CLC), Certificate Level Mathematics (CLM), GPA, Enjoyment of Campus Life, and Quality of Teaching as the criteria (in the form of dummy variables). Thus, the significance levels reported in Table 30 indicate that the levels of rating in the criteria were positively associated with the independent variables.

Table 30: Significant levels of ANOVA

Scale	A-Level Eng	A-Level Chi	Cert-Level Eng	Cert-Level Chi	Cert-Level Math	GPA	Enjoyment of campus life	Quality of teaching
Self-concept	0.25	0.41	0.19	0.44	0.72	0.44	**<0.005**	**<0.005**
Personal development	0.38	0.34	0.85	0.35	0.03	0.17	**<0.005**	**<0.005**
Time spent	0.85	0.77	0.18	0.64	0.65	0.56	0.75	0.20
Frequency in learning activities	0.94	0.10	0.27	0.76	0.08	0.13	0.20	0.09
Effective learning methods	0.88	0.75	0.23	0.47	0.99	0.44	0.27	**<0.005**
Barriers to learning	0.05	0.73	0.99	0.94	0.54	0.63	0.13	0.24
Reasons for entering tertiary education	**0.01**	0.08	**0.01**	0.11	0.93	0.28	0.04	0.03
Choice of study programme	0.78	0.16	0.03	0.54	0.31	**<0.005**	0.78	0.07
Social environment	0.90	0.35	0.49	0.15	0.05	0.44	0.21	0.03

The significant ANOVA results are highlighted and in bold face type in Table 30. A significance level of 99% was used. As regards students' university entrance and secondary school leaving examination grades, the ANOVA results indicate that students' English language ability reflected in the Advanced Level and the Certificate Level public examinations was a significant reason for students' entering tertiary education, whereas CLC and CLM grades were not significant factors in any of the scales. The importance given to the choice of study programme was a significant factor in students' GPA. Enjoyment of campus life was a significant factor in students' self-concept and personal development. Quality of teaching was a significant factor in students' self-concept, personal development, and methods of effective learning. Details of the ANOVA results are given in Appendix D. In terms of the Social Environment scale, Mathematics grade in the Certificate Level examination and Quality of Teaching were the two factors with sufficiently high significance levels. An overview of the ANOVA results is given in Figure 1.

Figure 1 Relationships between background/categorical variables and aggregated scales



5.3.7 Relationships among the aggregated scales

The underlying patterns of the relationships among the nine aggregated scales derived from the current study were explored further by using factor analysis as a data reduction statistical procedure. In this factor analysis, maximum likelihood was the extraction method. The communalities are reported in Table 31, and the unrotated factor matrix is reported in Table 32. Figure 2 presents the results of the scree test.

Table 31: Communalities (i) unrotated factor results

Communalities[a]

	Initial	Extraction
Self-concept	.246	.355
Personal development	.233	.358
Frequency in learning activities	.249	.376
Effective learning methods	.214	.279
Barriers to Learning	.120	.191
Time spent	.156	.324
Reasons for entering tertiary education	.344	.571
Choice of programme	.275	.470
GPA	7.131E-02	8.282E-02
Enjoyment of campus life	.114	.999
Quality of teaching	.174	.214
Social environment	.141	.193

Extraction Method: Maximum Likelihood

a. One or more communality estimates greater than 1.0 were encountered during iterations. The resulting solution should be interpreted with caution.

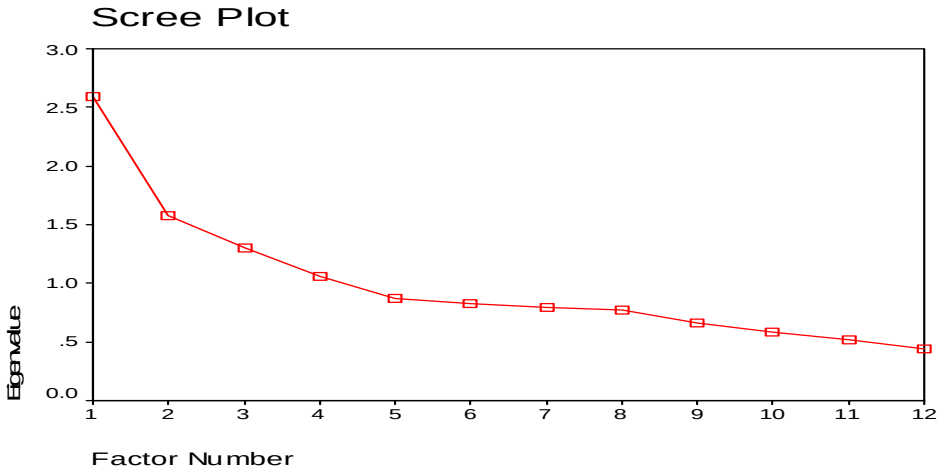
Table 32: Unrotated factor matrix

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared			Rotation Sums of Squared		
Factor	Total	% of Variance	Cumulative %	Total	% of Varianc	Cumulative %	Total	% of Varianc	Cumulative %
1	2.590	21.585	21.585	1.16	9.741	9.741	1.298	10.820	10.820
2	1.573	13.107	34.692	1.78	14.876	24.617	1.114	9.282	20.102
3	1.299	10.822	45.514	.831	6.928	31.545	1.055	8.793	28.895
4	1.057	8.805	54.318	.627	5.225	36.770	.945	7.875	36.770
5	.876	7.302	61.620						
6	.823	6.681	68.481						
7	.796	6.636	75.116						
8	.776	6.469	81.586						
9	.663	5.525	87.111						
10	.587	4.893	92.004						
11	.516	4.297	96.301						
12	.444	3.699	100.000						

Extraction Method: maximum Likelihood

Figure 2: Scree test result



The communalities in Table 31 and the scree plot in Figure 2 point to a four-factor solution. The rotated solution was based on Varimax. Table 33 reports the rotated factor matrix.

Table 33: Rotated factor matrix

Rotated Factor Matrix[a]

	Factor			
	1	2	3	4
Self-concept	.570	8.551E-2	-5.35E-02	.143
Personal development	.585	3.353E-02	-.112	4.788E-02
Frequency in learning activities	.225	.161	-2.49E-02	.546
Effective learning methods	.374	.172	-3.28E-02	.328
Barriers to learning	.210	-.183	-6.77E-02	-.330
Time spent	8.946E-02	-4.12E-02	1.073E-02	.560
Reasons for entering tertiary education	.130	.695	-.111	.243
Choice of study programme	6.206E-02	.678	5.713E-03	8.171E-02
GPA	.199	.187	5.707E-02	-6.98E-02
Enjoyment of campus life	-.148	-1.93E-02	.988	1.300E-02
Quality of teaching	.352	.192	-.203	-.107
Social environment	-.427	-1.41E-02	6.953E-03	-.104

Extraction Method: Maximum Likelihood
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 6 iterations.

Factor 1 can be defined as a predominantly Personal Orientation factor, which includes self-concept (Loading 0.57) and personal development (Loading 0.585), methods of effective learning (Loading 0.374), and quality of teaching (0.352) with moderate association. Social environment was negatively associated with Factor

1 (Loading -0.427). Factor 2 can be defined as a Higher Education Choice factor, which includes reasons for entering tertiary education (Loading 0.695) and choice of study programme (Loading 0.678). Factor 3 is a campus life factor (Loading 0.988). Factor 4 can be defined as a Learning style factor, which includes the contrast between frequency in learning activities (Loading 0.546), effective learning methods (Loading 0.328), time spent (Loading 0.56), and barriers to learning (Loading -0.33). A summary of the factors and the related aggregated scales is given in Table 34.

Table 34: Factors and the aggregated scales

Factor	Aggregated Scales
Personal orientation factor	Self-concept (Loading 0.57) Personal development (Loading 0.585) Effective learning methods (Loading 0.374) Quality of teaching (Loading 0.352) Social environment (Loading -0.427)
Higher education choice factor	Reasons for entering tertiary education (Loading 0.695) Choice of study programme (Loading 0.678)
Campus life factor	Enjoyment of campus Life (Loading 0.988)
Learning style factor	Frequency in learning activities (Loading 0.546) Methods of effective learning (Loading 0.328) Time spent (Loading 0.56) Barriers to learning (Loading -0.33)

The overall observation of the factor pattern indicates that the survey uncovered major aspects of students' university life, including fundamental personal characteristics (i.e. *self-concept and personal development*), choice for higher education (i.e. *reasons for entering higher education and choice of study programme*), enjoyment of campus life, and learning style (i.e. *frequency in learning activities, reflective learning methods, time spent, and barriers to learning*). Factor scores were derived based on the factor pattern uncovered above. These scores can be considered related to four aspects of college life and be further analyzed.

5.3.8 Relationships between entry academic performance and factor scores/ GPA

The four sets of factor scores (i.e. *Personal orientation, Higher education choice, Campus life,* and *Learning style*) represent the respondents' standing on these four aspects of university life, summarizing all the aggregated variables. This summarization helped achieve data reduction that could provide more general and super-ordinate aspects of university life. It would be informative to examine the effect of entry academic performance on the factors identified above in relation to the indices of college life. A series of ANOVA with Factor Scores as independent variables and ALE, ALC, CLE, CLC and CLM, and GPA as factors, was conducted. This was similar to what had been done previously. The results are reported in Table 35.

Table 35: ANOVA factor scores and categorical/ordinal variables

ANOVA Table	Sum of Squares	Mean Square	F	Sig.
ALE with				
Personal orientation	2.22	1.11	1.82	0.16
Higher education choice	0.45	0.23	0.34	0.71
Campus life	1.70	0.85	0.86	0.42
Learning style	0.79	0.40	0.73	0.48
GPA	18.73	9.37	11.87	**<0.005**
ALC with				
Personal orientation	1.76	0.88	1.44	0.24
Higher education choice	2.27	1.13	1.73	0.18
Campus life	0.90	0.45	0.45	0.63
Learning style	1.18	0.59	1.08	0.34
GPA	5.92	2.96	3.57	**0.03**
CLE				
Personal orientation	1.20	0.60	0.98	0.38
Higher education choice	9.81	4.91	7.77	**<0.005**
Campus life	0.02	0.01	0.01	0.99
Learning style	0.45	0.23	0.41	0.66
GPA	9.75	4.88	5.97	**<0.005**
CLC				
Personal orientation	0.10	0.05	0.08	0.92
Higher education choice	2.78	1.39	2.13	0.12
Campus life	0.94	0.47	0.47	0.62
Learning style	0.65	0.33	0.60	0.55
GPA	4.73	2.37	2.85	0.06
CLM				
Personal orientation	1.51	0.76	1.23	0.29
Higher education choice	0.41	0.21	0.31	0.73
Campus life	10.43	5.22	5.41	**<0.005**
Learning style	1.92	0.96	1.77	0.17
GPA	4.86	2.43	2.93	**0.05**

Results in Table 35 indicate that ALE was associated with GPA, as did CLE, which is related to Higher education choice. CLM is related to Campus life.

5.3.9 Relationships between entry academic standing and college life

A further series of ANOVA was carried out with the four factor scores and three bands within the five sets of entry academic scores: ALE, ALC, CLE, CLC, and CLM. The three bands of academic subject scores were Band 1 (i.e. grades A, B, and C), Band 2 (i.e. grades D and E), and Band 3 (i.e. grades F and U). The analysis aims to provide finer analyses of grades within academic subjects to provide more insights into the discussion on hand. These ANOVA results are also more detailed

than those done previously in the current thesis. Actual mean differences in the three bands of academic grades are reported to provide more details of the ANOVA. The means of the levels in the ANOVA are presented in Table 36.

Table 36: Means of entry academic levels and university life variables

ANOVA Table		ALE	ALC	CLE	CLC	CLM
		Mean	Mean	Mean	Mean	Mean
Personal orientation	A/B/C	0.30	0.05	0.15	0.11	0.30
	D/E	0.05	-0.03	-0.02	-0.01	0.05
	F/U	-0.04	0.22	0.18	0.01	-0.04
	Total	0.00	0.00	0.00	0.00	0.00
Higher education choice	A/B/C	-0.10	-0.24	0.20	-0.61	-0.10
	D/E	0.04	0.02	-0.06	-0.02	0.04
	F/U	-0.02	0.08	0.52	0.07	-0.02
	Total	0.00	0.00	0.00	0.00	0.00
Campus life	A/B/C	1.05	0.15	0.05	0.23	1.05
	D/E	-0.06	-0.01	0.00	0.03	-0.06
	F/U	-0.01	-0.06	-0.01	-0.06	-0.01
	Total	0.00	0.00	0.00	0.00	0.00
Learning style	A/B/C	-0.45	-0.14	0.11	-0.26	-0.45
	D/E	0.02	0.03	0.01	0.03	0.02
	F/U	0.01	-0.10	-0.11	-0.03	0.01
	Total	0.00	0.00	0.00	0.00	0.00

The significance levels of the ANOVA analyses are reported in Table 37. ALE and CLM are significant factors related to Enjoyment of campus life; CLE is a significant factor related to Higher education choice.

Table 37: ANOVA results

ANOVA	ALE	ALC	CLE	CLC	CLM
Personal orientation	0.29	0.24	0.38	0.92	0.29
Higher education choice	0.73	0.18	**<0.005**	0.12	0.73
Campus life	**<0.005**	0.63	0.99	0.62	**<0.005**
Learning style	0.17	0.34	0.66	0.55	0.17

5.4 Summary remarks

The analyses carried out in this chapter indicate that English grades at the Certificate Level and Advanced Level examinations influenced students' decision to

enter tertiary education, and CLE grade influenced their choice of study programme. Both ALE grade and CLE grade were related to GPA. This finding shows that students' English language ability has an important role in their education career. It affects their choice of academic programme as well as their academic performance in college. However one-third of the sample rated their English language ability as below average (Table 21). It is very likely that these students had the problem of studying in English. Moreover, 21% of the sample reported that they failed their ALE examination (Table 5). As such, a quarter of the sample (24%) considered their language ability a barrier, or half of them (52%) considered it a possible barrier to their studies (Table 8). English enhancement courses were provided in the college featured in the current study. However, 80% of the respondents were not required to take these courses (Table 12). This reason might explain why only 36% of the respondents reported that their English language ability became stronger after a semester-long study in college. More than half of the respondents (51%) did not consider that they had improved their English ability, and 13% even considered that their English proficiency became poorer (Table 22). Evidently, there is a gap between the needs of students and the actual assistance they were given for their studies.

A sizeable number of respondents reported problems in academic-related skills, including "communication skills in writing", "public speaking skills", "reading speed/comprehension", and "mathematical skills". However, they were not particularly active in making the necessary change even though institutional support was available for them. Take study skills for example. About 15% of the respondents in this survey admitted that their study skills were a definite barrier to their learning, and 65% regarded their study skills as a possible barrier (Table 8). However, more

than half of the respondents (59%) reported no improvement in their study skills after attending college for one semester (Table 22). This finding implies that many students did not make sufficient effort to improve their study skills, although they noted that they had problems in this aspect.

The survey results also reveal that respondents' integration into the college environment was very restricted because they were very indifferent about the extra-curricular activities; their interaction with teachers was only down to a minimum, and the relationships among students were confined to small groups. Most of them did not take part in any student clubs and societies. Their social engagement in the college environment was confined mainly to the classroom setting and within small groups.

Finally, the factor analysis results are interesting in that the four factors extracted did relate to four aspects of college life: Personal orientation, Choice of higher education, Campus life, and Learning style. The factor scores can be used to uncover students' disposition and involvement in the four aspects of college life.

Chapter 6

Interview Findings

6.1 Introduction

The results of the survey conducted for the present study reveal that a sizeable group of students experienced difficulties in handling the academic demands of college study. More than 60% of the sample admitted they felt overwhelmed by coursework. Nearly half of the sample felt bored in class, and more than one-third found following lectures difficult (Table 7, p. 89). Inefficient time management, low motivation, deficient study skills, and inadequate English language competence were the major learning barriers identified by the sample. Overall, the sample related their adaptation problems to academic rather than social or personal issues.

To explore further students' perceptions of their adaptation to college study based on the student adaptation framework of Baker and Siryk (1989) and from the perspective of learning, a series of individual face-to-face interviews was conducted with 24 students from the same subject disciplines. As described in Chapter 4 (Methodology), twelve students, that is, six males and six females, were selected for each discipline. The selection was based on their university entry scores, in which students were classified into three groups, namely high-performer group, mid-performer group, and low-performer group. From each group, one student with a high GPA and another with a low GPA were selected.

Gender differences in learning may influence how students handle the new academic demands. Therefore, gender was included in the selection criteria of the interview participants. Wehrwein, Lujan, and DiCarlo (2006) undertook a study on gender differences in learning style preferences among undergraduate physiology

students using an instrument called VARK.[1] The study confirmed that male and female students had different preferences in learning styles. In addition, a majority of female students preferred a single mode of information presentation, whereas a majority of male students preferred multimodal instruction. The study also reported that males and females had different beliefs about what is most important to student learning. Females tended to attach a higher degree of importance to social interaction and self-confidence than did males.

The study of McInnis and James (1995) on the diversity in the initial experiences of Australian undergraduates reveals significant differences between male and female students in terms of academic orientation, academic application, sense of purpose, and overall satisfaction with the course they were attending. According to the study, female students were more positive about their initial experience in the university. Therefore, the current study attempted to determine the differences between male and female students in terms of their attitudes and perceptions towards the transition from school to university. Table 38 presents the participants who were invited for the interviews.

[1] VARK questionnaire assesses learning styles based on a sensory modality in which a student prefers to take in new information. V stands for Visual, A for Auditory, R for Read/Write, and K for Kinesthetic.

Table 38: List of interviewees

	High-performer Group		Mid-performer Group		Low-performer Group	
Building Science Boys	One high GPA	*BS_B_HH*	One high GPA	*BS_B_MH*	One high GPA	*BS_B_LH*
	One low GPA	*BS_B_HL*	One low GPA	*BS_B_ML*	One low GPA	*BS_B_LL*
Building Science Girls	One high GPA	*BS_G_HH*	One high GPA	*BS_G_MH*	One high GPA	*BS_G_LH*
	One low GPA	*BS_G_HL*	One low GPA	*BS_G_ML*	One low GPA	*BS_G_LL*
Social Studies Boys	One high GPA	*SS_ B_HH*	One high GPA	*SS_B_MH*	One high GPA	*SS_B_LH*
	One low GPA	*SS_B_HL*	One low GPA	*SS_B_ML*	One low GPA	*SS_B_LL*
Social Studies Girls	One high GPA	*SS_G_HH*	One high GPA	*SS_G_MH*	One high GPA	*SS_G_LH*
	One low GPA	*SS_G_HL*	One low GPA	*SS_G_ML*	One low GPA	*SS_G_LL*

6.2 General profile of the interviewees

At the time when these interviews were held (i.e. Summer 2007), all the interviewees had just completed the first year of their associate degree programme. All of them passed the first year examination and proceeded to the final year of their study.

All except two participants in these interviews are the first generation to receive tertiary education in their families. All received a low-to-modest university entry score, that is, between 1 and 14. Generally, the English language proficiency of the sample was at a mid-to-low level. Among the participants, sixteen of them received a pass (i.e. four received a D and twelve an E), and one received a credit in the Advanced Level English (ALE) examination, and seven of them failed the ALE examination. Tables 39a to 39d present the background information of the interviewees.

Table 39a: Males in the Building Science group

	BS_Boy (HH)	***BS_Boy (HL)***	***BS_Boy (MH)***	***BS_Boy (ML)***	***BS_Boy (LH)***	***BS_Boy (LL)***
1st generation university entrant	Yes	Yes	Yes	Yes	Yes	Yes
ALE grade	F	F	E	F	E	E
CLE grade	F	E	E	E	E	D
MOI in Certificate-Level study	Chinese	Not reported	Chinese	Chinese	Chinese	English
MOI in Advanced-level study	Chinese	Not reported	Chinese	Chinese	English	Chinese
University entry score	10	10	6	7	3	3
GPA	3.75	1.55	3.87	1.83	3.31	1.82
Joined O camp	Yes	Yes	No	No	Yes	No
Worked part time	No	No	No	No	No	No
Financial support for study	Grant and Loan	---	Grant and Loan	Family	Grant and Loan	Family

Notes: ALE Grade refers to the grade obtained in the Advanced Level English examination.
CLE Grade refers to the grade obtained in the Certificate Level English examination.
MOI refers to the medium of instruction.
O camp refers to the orientation camp.

Table 39b: Females in the Building Science group

	BS_Girl (HH)	***BS_Girl (HL)***	***BS_Girl (MH)***	***BS_Girl (ML)***	***BS_Girl (LH)***	***BS_Girl (LL)***
1st generation university entrant	Yes	Yes	Yes	Yes	Yes	Father is an university graduate
ALE grade	D	E	E	D	E	D
CLE grade	D	D	D	D	D	C
MOI in Certificate-Level study	English	Mixed-code	English	Chinese	Chinese	English
MOI in Advanced-level study	English	Chinese	Chinese	English	Chinese	English
University entry score	10	10	8	6	2	3
GPA	3.33	1.15	3.84	1.86	3.41	1.5
Joined O camp	No	Yes	Yes	No	No	No
Worked part time	Quit	Yes	Yes	Yes	No	Quit
Financial support for study	--	--	Family	---	Family	Family

Notes: ALE Grade refers to the grade obtained in the Advanced Level English examination.
CLE Grade refers to the grade obtained in the Certificate Level English examination.
MOI refers to the medium of instruction.
O camp refers to the orientation camp.

Table 39c: Males in the Social Studies group

	SS_Boy (HH)	***SS_Boy (HL)***	***SS_Boy (MH)***	***SS_Boy (ML)***	***SS_Boy (LH)***	***SS_Boy (LL)***
1st generation university entrant	Yes	Yes	Yes	Yes	Yes	Parents received teacher training
ALE grade	E	E	E	F	E	D
CLE grade	D	E	E	E	D	D
MOI in Certificate-Level study	English	English	English	English	English	English
MOI in Advanced-level study	English	Chinese	English	Chinese	English	Chinese
University entry score	10	10	8	8	4	4
GPA	3.2	2.54	3.46	2.26	3.62	2.26
Joined O camp	Yes	Yes	Yes	No	No	Yes
Worked part time	No	No	No	Yes	Yes	Yes
Financial support for study	Family	Family	Family	Family	---	---

Notes: ALE Grade refers to the grade obtained in the Advanced Level English examination.
CLE Grade refers to the grade obtained in the Certificate Level English examination.
MOI refers to the medium of instruction.
O camp refers to the orientation camp.

Table 39d: Females in the Social Studies group

	SS_Girl (HH))	***SS_Girl (HL)***	***SS_Girl (MH)***	***SS_Girl (ML)***	***SS_Girl (LH)***	***SS_Girl (LL)***
1st generation university entrant	Yes	Yes	Yes	Yes	Yes	Yes
ALE grade	F	F	C	E	E	F
CLE grade	E	E	D	D	D	E
MOI in Certificate-Level study	Chinese	Chinese	English	English	English	Chinese
MOI in Advanced-level study	Chinese	Chinese	English	English	English	Chinese
University entry score	14	12	7	6	2	1
GPA	3.38	1.96	3.57	2.66	3.38	2.38
Joined O camp	Yes	Yes	Yes	Yes	No	No
Worked part time	Yes	No	Yes	Yes	Yes	No
Financial support for study	Family	---	---	Family	Family	Family

Notes: ALE Grade refers to the grade obtained in the Advanced Level English examination.
CLE Grade refers to the grade obtained in the Certificate Level English examination.
MOI refers to the medium of instruction.
O camp refers to the orientation camp.

Among the four groups, the English language proficiency of BS boys and SS girls was the lowest. For BS boys, three of them failed their ALE examination. Four of them came from a Chinese-medium secondary school, and one of them switched to a Chinese-medium school for his Advanced-level study. Such switch can

be interpreted as an indicator of not achieving satisfactory public examination results. In the context of Hong Kong, English-medium schools generally have a higher academic status than Chinese-medium schools, and a higher English proficiency is commonly believed to provide a better path for both academic and career advancement. Similarly, three SS girls failed the ALE examination. Three of them studied in a Chinese-medium school, and another three studied in an English-medium school. Three SS boys switched to a Chinese-medium secondary school from an English-medium one to take their Advanced-level study.

The English proficiency of BS girls was the strongest. Three girls received a D, and another three received an E in the ALE examination. However, no pattern on the correlations between the interviewees' English competence and their GPA, discipline of study, and gender can be identified. If judged from the performance of the sample in the two public examinations, the majority of sample probably had trouble using English as a study medium. The survey conducted by Evans and Green (2007) of 5000 undergraduates of Hong Kong's largest English-medium university supports that a significant percentage of the subjects experienced difficulties in using English as a medium of instruction. The subjects were especially poor in writing and speaking in English. The survey suggests that almost 5000 students who participated in the survey faced the problem of "inadequate receptive and productive vocabulary in English" (p. 14).

Almost half of the interviewees (11 out of 24) indicated that they did not join the freshmen orientation camp for various reasons. Two said that they missed the event because they were accepted in the second round. One did not join the camp because he found the fee too high. Another missed the opportunity because of a job commitment. Two interviewees said that their departments did not organize any

orientation camp for the newcomers. One interviewee did not go to the camp because he thought he would not make friends there. Others said that they missed the deadline. The interviewees regarded the orientation camp as a social event through which they would be able to make friends and meet people. None of the interviewees expected to understand better the learning environment, the academic structure, or the requirements of their programme through this activity.

Nonetheless, more than half of the orientation camp participants considered it a worthwhile activity, and two considered that joining an orientation camp was a symbol of college enrollment. Only one participant had negative feedback. He found the orientation camp boring and commented that the activities were of low taste.

In Hong Kong, college students engaging in part-time employment is common. About ten out of the twenty-four interview participants, including four SS girls, three SS boys and three BS girls, had part-time work. Two BS girls indicated that they quit their part-time job because of the work demand of their studies. None of the BS boys had any part-time commitment. This finding indicates that the workload of the Building Science discipline may be heavier than that of the Social Studies discipline, which is the reason why BS students were not able to spare time for part-time work. The data also suggest that students placed higher priority on their studies. They were likely to give up their part-time job if they considered it to interfere in their studies.

6.3 Frame of analysis

The interviews were conducted with reference to an interview plan that covers six dimensions: background, self-evaluation of academic progress and quality of relationships with teachers and fellow students, perceptions of adaptation and

problems identified, conceptions of learning, perceived support, and definition of academic success. The responses of the interviewees to the six dimensions were analyzed and compared, with particular attention given to the differences in the sample's discipline of study, gender, university entry score, and academic performance annotated by GPAs.

6.4 Findings and discussion

This section aims to discuss the major findings of these interviews in relation to the research questions set for the current study. The discussion will revolve around issues relating to students' perceptions of adaptation, their academic and social adaptations, as well as their definition of academic success.

6.4.1 Perceptions of adaptation

(i) Nature of adaptation problems

Did the interviewees in this study experience any adaptation problems with college study? Table 40 presents the responses of the interviewees on their initial adaptation to the college environment. Their responses are classified into four categories according to the nature of the problem. "None" denotes that the interviewees identified no adaptation problems at all. "Academic problems" covers issues related to learning method, assessment, programme structure, and medium of instruction. "Social problems" covers issues related to people, interaction, and communication. "Self-management issues" considers issues related to learner autonomy and time management.

Table 40: Perceptions of adaptation: Excerpts of interviewees' responses

Sample	Extract of Response	Nature of problem
BS_B_HH	"My elder sister already told me what university life would be like, and I found no big difference between what I came across and what I had expected."	None
BS_B_HL	"I am not used to the credit unit system. I think each course will last for a year. I don't know that I have to study different courses in semesters A and B."	Academic
BS_B_MH	"I did not have any problems in adapting to the new environment, but I wish I had known more about my study programme before I started college."	None
BS_B_ML	"I found no difficulty in getting along with my teachers and my peers, but I had some difficulty with my studies."	Academic
BS_B_LH	"It was a bit difficult at the beginning because I had not studied the subject before. Everything seemed to be unclear to me, such as the examination format, teaching method…. Moreover, there was a lot of extra work like laboratory sessions and group projects."	Academic
BS_B_LL	"I think I did not have any adaptation problems because I repeated Form 7. This gives me more time to get prepared for college study."	None
BS_G_HH	"I did not have adaptation problems, but I did find quite a number of classmates who felt they were not accustomed to the new mode of learning."	None
BS_G_HL	"It took me about one and a half months to get used to the new environment. The programme of study was different from what I had expected."	Academic
BS_G_MH	"The courses at university are very intensive, so I have to look for references to understand the content. In the first semester, I adapted quite well because the materials covered were similar to those I learnt in secondary school. However in the second semester, I found the subjects taught quite	Academic

	difficult.”	
BS_G_ML	“I did not have any adaptation problems. I studied hard in the first semester, but I felt so disappointed with the assessment result. I became less focused on my studies in the second semester. I lost confidence.”	None
BS_G_LH	“My study programme adopted the problem-based learning approach. We were given one week to adapt to this approach. I got used to it quite easily.”	None
BS_G_LL	“I did not adapt to the college learning method because I suddenly had too much freedom. I had difficulty in managing my timetable. I did not know how to manage information that I searched from the Internet.”	Academic & self-management
SS_B_HH	“I adapted to college life very easily because my mentor had already told me what college life would be like…. The programme I am studying is my favorite one. I’ve adapted to college study very well.”	None
SS_B_HL	“The learning method was completely different from that was adopted in secondary school. I didn’t feel motivated to study hard.”	Academic
SS_B_MH	“In the first semester, I was a little bit scared by the environment because I did not know any of my classmates.”	Social
SS_B_ML	“I had some adaptation problems with the learning method at the beginning, such as group discussion. I was not used to sharing views with a group of people.”	Academic
SS_B_LH	“The adaptation problem that I faced was mainly about assessment. I was not used to writing essays. However, after consulting my mentor, I worked better in the second semester.”	Academic
SS_B_LL	“I had no adaptation problem with teachers, classmates, and learning. The only adjustment I had to make was to exercise more self-discipline than before. When I was in secondary school, no matter how lazy I was, the teacher would push me,	Self-management

	but in college, no one push me."	
SS_G_HH	"I had some adaptation problems at the beginning, but overcame them afterwards… I took a course, which was about issues and concerns of college students. I found it very useful. It inspired me to think deeply and helped me to adapt to college life."	Academic
SS_G_HL	"I was not used to studying in English, especially writing in English."	Academic
SS_G_MH	"I was not used to the learning method in the first semester because the learning method was completely different from that was adopted in secondary school."	Academic
SS_G_ML	"I had some adaptation problems at the beginning of the semester because I did not know how to search for learning resources and information, and did not know my teachers' expectations. My time management was not good, and I did not work very well with my group mates. I found it a bit difficult to express ideas in front of strangers."	Academic & self-management
SS_G_LH	"My experience in group work in semester A was bad because my group mates and I had different expectations. Some of my group mates' English is not good enough for studying through the medium of English."	Academic
SS_G_LL	"I did not have any adaptation problems."	None

Among all interviewees, eight of them indicated that they did not have any adaptation problems at all. Of these eight interviewees, five received a high GPA, and six belonged to the Building Science group. Two high performers (i.e. BS_B_HH and SS_B_HH) reported that they had no adaptation problems mainly because they were briefed about college life beforehand by their siblings or their mentors. Another high performer (i.e. BS_G_LH) said that her study programme adopted the problem-based learning approach and she was introduced to this learning

approach in the first week. As she managed to become accustomed to it gradually, she adapted to the new environment easily.

Among the sixteen interviewees who indicated that they had some kind of adaptation difficulties, ten of them were from the Social Studies group (i.e. 5 boys and 5 girls), and six were from the Building Science group (i.e. 3 boys and 3 girls). The problems reported were mostly concerned with academic matters such as learning method, assessment, programme structure, subject difficulties, etc. Only one interviewee (i.e. SS_B_MH) related his problems to social adaptation. He said that he felt insecure at the beginning because he had no acquaintances in the college.

Two low performers (i.e. BS_G_LL and SS_G_ML) raised the issue of time management, and one low performer (i.e. SS_B_LL) reported difficulty in exercising self-management. Another low performer (i.e. SS_G_HL) considered that her problem was caused by her English language ability as she was not used to studying in English. Three interviewees in the SS group (i.e. SS_B_ML, SS_G_ML, and SS_G_LH) indicated that they had difficulty in group work.

(ii) Matches and mismatches of college expectations

The interviewees were asked to talk about their expectations of college life, as well as whether there were any matches and mismatches between their expectations and the actual experiences. In brief, the interviewees' expectations for college life are summarized into three themes:

- More relaxed life (five interviewees) and less workload (seven interviewees)
- More freedom (eight interviewees)
- More exposure to a variety of experiences and activities including organizing student committees and clubs (five interviewees)

A significant proportion of the sample (12 in total) expected that college life would be more care free and more freedom would come with it. Their concept of freedom simply refers to the absence of restrictions about class attendance and school uniform. At least five interviewees indicated they expected that the first year of college would be like a honeymoon year, in which they were free from the stress of public examinations and had less workload. Nonetheless, they found the workload to be heavy, and they could not afford the time to join any student activities because of the pressure of attainting a high GPA to gain admission to a funded degree programme. This situation was in contrast to their expectation of being exposed to more experiences. Among them, three interviewees (i.e. BS_G_ML, BS_G_LL, and SS_B_LH) said that they did not think about what college life would be beforehand, as they simply aimed to gain admission to college. Thus, they were not able to comment on whether their expectations were met. The following excerpt best describes the view of these three interviewees:

> "I did not think much about what college life would be when I was in secondary school. I only hoped to enter tertiary education." (SS_B_LH)

(iii) Information they wanted to know

When the interviewees were asked what they wished they had known more, only eleven shared specific information. The type of information they wanted to know was mostly factual, such as the GPA requirement for entering a degree programme (two interviewees), course content (two interviewees), operation of the credit unit system (one interviewee), and career opportunities (one interviewee). Some were concerned about time management skills (two interviewees) and getting good grades (one interviewee). One low performer (i.e. SS_G_LL) said that she wanted to know more about the structure and status of the associate degree programme. Another low performer (i.e. SS_B_HL) wanted to know more about the

college culture and particularly the learning method. One high performer (i.e. BS_G_MH) remarked, “I don’t think anyone can tell me in advance what I need to do because I need to experience life on my own.”

6.4.2 Academic adaptation

To examine their perceptions of academic adaptation, the interviewees were asked to rate their academic performance, assess the amount of workload, identify the differences between secondary school learning and college learning, describe the type of learning difficulties they experienced, and share how they coped with these difficulties and the type of support they expected to obtain.

(i) Self-rating of academic performance

In response to the request to rate their own academic performance, almost all interviewees assessed their own performance based on their GPA. Out of the twelve interviewees obtaining a low GPA, eight of them rated their academic performance as below average. The others considered their performance acceptable. Two low performers (i.e. BS_G_HL and BS_G_ML) in the Building Science group remarked that their low performance was caused by the lack of interest in the subject they were studying. Another two (i.e. BS_B_HL and BS_G_LL) indicated that they were not used to the learning method in college. Two (i.e. BS_B_ML and SS_G_HL) considered that their inadequate English competence affected their academic performance. Two (i.e. SS_B_LL and BS_B_LL) said that their performance was below average, but they were satisfied with the outcomes when considering the effort and time they had given. One interviewee made the following comment:

> “In my view, the more time I spend studying, the better result I receive. There is a positive correlation between the time you spend and the performance outcome.” (BS_B_LL)

This comment supports the research on Chinese learners in the nineties that Chinese students believe in effort more than ability, whereas western students believe the opposite (Watkins, 2000, 2007). The other low performers attributed their below-average performance to laziness, inefficient group work, and new learning environment.

A common characteristic among the high performers is that they could articulate clearly what study method they adopted to cope with their studies and that they could easily tell the number of hours they spent in class, as well as the number of hours spent on self-study. They tended to be more eager to use the support systems provided by the college, such as the mentoring scheme and the supplemental instruction scheme. They also commented favorably on the helpfulness of this kind of support.

(ii) Perceptions of workload

Among the twelve Building Science interviewees, nine considered their academic workload heavy. The remaining three who held an opposite opinion were the low performers. On the contrary, nine Social Studies interviewees regarded their workload to be manageable, while the remaining three thought the opposite. These three students received a low GPA. The data suggest that there may be a correlation between student workload and the discipline of study. In the present study, the Building Science students seem to have a heavier workload. Kember (2004) conducted a study on the interpretation of student workload and the factors affecting students' perceptions of their workload. He argued that workload should not be interpreted simply as the number of contact hours for classes and the time spent on independent study. Students' perceptions of workload were influenced by certain factors, which include course content, course difficulty, assessment type, and

teacher–student and student–student relationships (p. 165). This finding indicates that the interpretation of workload is not simply an academic matter, but it also involves social elements, that is, the teacher–student and student–student relationships.

(iii) Differences between secondary school and college learning

The interviewees were asked to compare the mode of learning between secondary school and college. Generally, the interviewees made a distinction between active and passive learning in relation to the mode of learning in college and secondary school. They identified two major differences. One difference is in learner autonomy. In secondary school, teachers lead and students follow. Teachers give notes and model answers, as well as monitor student progress through quizzes and examinations. Students only need to memorize facts and key points for examinations. In college, the responsibilities totally shift. The students are expected to exercise self-discipline. They need to take their own notes, search for information, decide on electives, form groups, and work in groups. Some students need time to be accustomed to this shift in responsibility.

Another difference is that secondary education relies on rote learning, whereas college education prefers critical thinking. The interviewees realized that college study required more analytical thinking on their own. Almost all the interviewees, including both the high and the low performers, said that they preferred the style of learning in college. Even those indicating that their thinking skills might not be sophisticated enough for them to handle the demands of college also preferred the college style of learning as they found secondary education to require much recitation and rote learning. The comments below show how the interviewees compared learning in college with learning in secondary school:

> "College requires students to think and understand what they are taught. Students have to learn actively." (BS_B_LL)
>
> "In secondary school, I seldom thought about what I was taught. I only copied notes." (BS_G_LL)
>
> "In secondary school, my teacher pushed me to work hard. Now, no one pushes me…. I prefer the mode of learning in college because I prefer thinking to reciting notes." (SS_B_LL)
>
> "In secondary school, students always memorize the notes to pass the examination. College is different. Teachers encourage students to think." (SS_G_LL)

(iv) Changes in study approaches

What sort of changes did the interviewees undergo to cope with their studies in college? Did they make any changes to their learning approaches? Among the twenty-four interviewees, eleven indicated that they changed their study approaches to deal with college learning. The frequently cited strategies were doing extra readings and searching for information on the Internet. One interviewee said that her skills in searching for, summarizing, and analyzing information improved.

> "With the new learning mode in college, I have learnt how to search for information and made improvements in summarizing and analyzing." (BS_G_MH)

However, not everyone felt comfortable with the required changes. On the downside, some interviewees reported difficulty in managing the vast amount of information collected from the Internet and doing a great volume of reading on their own.

> "I really did not know how to manage the information that I found on the Internet." (BS_G_LL)

The following comment elaborates how a high performer in the Building Science group described the changes she made to cope with learning in college:

> "In secondary school, I only needed to put together all the information collected for my assignment. Now, I need to work with a group. We discussed, evaluated each other's viewpoints, compromised among ourselves, and then wrote up our conclusions and solutions…. There are

more analyses, summaries, and judgments in our assignments." (BS_G_HH)

Several interviewees reported that they did not change much in their approaches to learning. Instead, they changed their attitude. They became more serious and hardworking, as they needed to strive for a high GPA of 3.3 or above to be admitted to a full degree programme funded by the government.

(v) Coping strategies

What coping strategies did the interviewees adopt to handle the new academic demands in college? Most of the interviewees did not seem to have taken any proactive ways to cope with the new requirements such as researching and doing extra readings. More than half of them chose to give up social activities. They believed that the more time they spent on studying, the better results they would obtain. The high performers reported more proactive strategies:

- Borrow good assignments to read and compare them with their own work. (BS_B_MH)
- Seek feedback from teachers. (BS_G_LH)
- Set goals for oneself and plan before work. (SS_G_LH)

Conversely, the strategies adopted by the low performers appeared to be more passive:

- Skip classes to complete the assignment. (BS_G_HL)
- Avoid uncooperative group mates. (SS_B_ML)

(vi) Sources of help

What personal and social resources did the interviewees use to cope with the academic and personal demands of college? In terms of seeking assistance for their study from others, almost all the interviewees regarded teacher assistance as the last resort. Only one interviewee said that she would talk to her teacher first to

determine whether the other students had similar problems. Half of the interviewees chose to discuss their problems with their group mates or classmates. Eleven interviewees said that they would solve the problem themselves first. No relationship could be associated between the interviewees' choice for assistance with their university entry score, discipline of study, gender, and GPA. The choice seemed to be caused completely by individual preferences.

(vii) Support for learning

When the interviewees were asked to identify the support they would like to receive for their learning, ten interviewees responded from the perspective of evaluating the physical provisions, such as computing facilities, opening hours of the library, facilities of design studios, etc. Seven of them were satisfied with the support they were given. As regards the learning support courses provided by the student services of the college, only three interviewees (i.e. BS_G_LH, BS_G_LL, and SS_G_LH) reported that they did make use of the opportunity. However, two of them considered the course that they joined to be not useful at all. Another three interviewees (i.e. BS_B_LL, BS_G_MH, and SS_G_MH) reported that they could not afford the time to join these courses. Two other interviewees (i.e. BS_B_MH and SS_B_ML) said that they did not join those courses simply because no other peers joined them. However, a high performer (i.e. SS_G_HH) responded positively about this type of course. She said that she joined a course on issues about college study and found it very inspiring. She remarked that the course facilitated her adaptation to college study.

In general, most of the interviewees did not have high regard for the learning support programmes. Instead, they simply regarded them as supplements that were useful to have but were not of high priority. An interesting observation is

that the high performers seemed to have positive opinions on the academic support schemes offered to them. In addition, they found the academic support schemes useful. One high performer (i.e. SS_G_HH) said that she found the mentoring scheme very useful. Another high performer (i.e. BS_B_HH) commented favorably on the Supplemental Instruction Scheme[2] in which he took part.

(viii) Difficulties identified

The interviewees were asked about the sufficiency of their skills in handling the academic demands of college and their sources of stress. They identified four major concerns: English language competence, learner autonomy, information searching skills, and group work.

Among these four concerns, the respondents identified group work to be the more difficult. Group work is a major form of coursework in college, which prepares students to see the real world of work. Fourteen interviewees raised the issue of group work, and nine of them reported having negative experiences when working in groups. The frequently occurring problems include irresponsible members, insufficient guidelines from teachers, time required for compromising with group mates, and difficulties in logistics such as arranging meetings.

One high performer (i.e. SS_G_LH) said that she had to do the work of her group members because their English was not sufficient to handle the project. Another high performer commented the following:

> "I prefer individual papers because I have more control of my own work. I do not need to spare time to negotiate with group mates. Although I agree that group work can obtain ideas from different people, in my experience, I do not see my group mates to have useful ideas to contribute. Some of them did not even know what the project topic was about." (SS_G_MH)

[2] Under the Supplemental Instruction Scheme, seven students are put in a group, which is supervised by a senior student from the same programme.

Surprisingly no interviewee mentioned the issues of group work assessment and workload distribution. Instead, the interviewees did not resist doing the work for their group mates to avoid damaging the quality of the project outcomes. The interview data suggest that many students did not seem to have the necessary skills to work effectively in groups and that they were not able to obtain the benefits of this form of learning.

6.4.3 Social adaptation

Social adaptation provides a solid foundation for overall adaptation to the college environment. Some researchers, such as Tinto (1975, 1986, 1993), have theorized that student persistence is largely determined by how well students integrate into the social and academic fabric of college life. Social adaptation may facilitate academic adaptation. One interviewee gave the following comment:

> "I did not have much difficulty in adapting to college life because I was able to make friends on the orientation day." (BS_B_HH)

This comment supports the importance of peer support during the adaptation process. Aside from peer support, student engagement in extra-curricular activities, perceived quality of teaching, and student–student/student–teacher relationships are important factors contributing to the social integration of students into the college environment.

i) Participation in extra-curricular activities

Undoubtedly, extra-curricular activities are an integral part of the whole person education. Through their participation in extra-curricular activities, students get the opportunity to meet other students from different years and fields of study and to learn valuable soft skills that are highly useful in their lives. Similar to the findings of the questionnaire survey, the sample in this series of interviews was not keen to join any campus activities out of the curriculum. They tended to regard the activities outside the curriculum as extras. Out of the twenty-four interviewees,

fourteen of them indicated they did not join any extra-curricular activities at all. All of these fourteen interviewees held the same view that extra-curricular activities might interfere with their studies. They remarked that they needed to achieve a high GPA to get into a full degree programme. Therefore, they chose to give up these activities so as to concentrate on their studies. Interestingly, out of the remaining ten interviewees who indicated that they participated in some extra-curricular activities, seven obtained a low GPA. The finding probed into whether their participation in these activities caused their low academic performance, or whether their dissatisfaction with their academic achievement led them to participate in these activities. The low performers were more active in extra-curricular activities in order to develop their potential through other means.

ii) Perceived teaching quality and teacher–student relationships

The survey of the present study reveals that the quality of teaching is an important factor affecting student perceptions of the college environment. Generally, the interviewees under study had a favorable view of the teaching staff. They found their teachers to be knowledgeable, enthusiastic, approachable, and able to deliver a high quality of teaching. Although the interviewees had a positive opinion of the teaching quality of the college, they were rather detached from their teachers. Among the interviewees, eleven said that they seldom talked to their teachers or consulted them. The others considered their relationships with teachers to be “just okay”. Their responses reveal that the teacher–student interaction only occurred during class time. Therefore, a primary concern is the establishment of a supportive learning environment after class.

(iii) Student–student relationships

The interviewees seemed to be more satisfied with their relationships with other students. The majority of the sample considered their relationships with their classmates “good”. Only three of them seemed unhappy with their relationships with the other students. One said that she felt rather alienated because the group was too large, and it was difficult for her to communicate with the others. Another two indicated that they did not make any new friends because they were passive and shy. In fact, interaction among students appeared to have been restricted to small groups, as most of them chose to give up out-of-class activities to cope with their studies. How could they have any other opportunities to interact with other students as none of them had the opportunity to live in the college residence, which is only for students in full degree programmes?

6.4.4 Definition of academic success

(i) Goal of college education

How did the interviewees in the current study evaluate their gains/achievements/success in college attendance? Did they judge their attainment in terms of academic attainment (GPA), progression to the next course of study, vocational development, or personal development similar to vectors suggested by Chickering and Reisser (1993)? Before examining the interviewees’ definition of academic success, a closer examination of the interviewees’ views on the purpose of college education and the benefits of college attendance is required. Undoubtedly, all the interviewees had the immediate goal to proceed to a degree programme. Their goal was clear, as an associate degree was only a stepping stone for them to get into a degree programme. As for the broader goal of attending college, unsurprisingly, the goal of the majority was vocational-oriented, i.e. to gain a qualification for a

particular career. Fifteen interviewees linked college education directly to employment. They remarked that the main purpose of college education was to prepare them to join the workforce. The following comment is a good representation of the view of these interviewees:

> "A degree is like an entry ticket for a better job. I would choose a programme that would provide me with better opportunities for a future career." (BS_B_MH)

Some interviewees also considered the other benefits of college education. Five interviewees regarded networking activities would enable them to broaden their social circle, which should be an integral part of college education. Thus, they placed establishing a social network as their primary goal for attending college. These interviewees were particularly keen to broaden their social circle and value the opportunity to meet people from different backgrounds. Four of these interviewees (i.e. BS_B_ML, BS_G_HL, BS_G_LL, and SS_B_ML) who held this opinion were in the low GPA group.

Four interviewees (i.e. BS_G_LH, SS_B_HH, SS_B_MH, and SS_G_MH) remarked that they looked for opportunities for self-exploration in college education. What they were looking for was actually a medium for exposure and life enrichment. They wanted exposure to things that were unknown to them, and they needed to explore their potential as fully as possible. They also wished to find out about fields that might otherwise be unavailable to them. They were also keen to improve their personal qualities. All these four interviewees received a high GPA.

(ii) Indicators of academic success

How did the interviewees define success in college? Two popular views exist. The first view considers college success as the seeking of knowledge. The students holding this view judged from a wider perspective of whether they learnt

with understanding and whether they would apply that learning in their lives. They placed a strong emphasis on the acquisition of professional knowledge and technical skills through their college study. Only two interviewees simply considered GPA as an indicator of academic attainment.

The second view considers the development of personal qualities as an indicator of success. The interviewees remarked that college education would enable them to acquire soft skills, such as time management, leadership, and teamwork skills. They considered that these skills would enable them to deal with changes in their lives and develop them as life-long learners. Among this group of interviewees, several of them were particularly concerned about the development of interpersonal skills, which they considered essential for the broadening of their social circle. Others mentioned critical thinking and confidence building as well. Although the interviewees associated the development of soft skills with college education, they generally did not take any action to improve themselves in these aspects. They seemed to lack a good understanding of the kind of training or opportunity required to acquire these skills.

6.5 Summing up

The interview data indicate that a number of students agreed that they had adaptation problems with the college environment and that the problems they raised were mainly of academic nature. The university entry score and gender of the sample did not appear to have any influence on the sample's perceptions of college adaptation. However, different perceptions were observed between the high and the low performers in terms of their strategies in dealing with academic demands and handling of learner autonomy. The high performers had better focus and more

positive views towards the overall environment of the college. Moreover, they were more willing to accept available support and opportunities. The high performers and the low performers also hold different views on the goal for higher education. The high performers were interested to develop their personal qualities and looked for opportunities for self-exploration, whereas the low performers are keen to establish social networks.

Students' field of study also affected their goals of study and perceptions of workload. For example, the students from the Social Studies discipline attached a higher degree of importance to their personal development rather than to their academic attainment. Thus, they were more interested in developing themselves in this regard. The Building Science students tended to rate their workload as heavy.

One major finding from the interviews that supports the survey results is that the sample's choice of study programme affected their academic performance as well as their perceptions of the college environment. Three low performers in these interviews gave rather negative responses on their perceptions of the learning environment. They attributed their low performance to having no interest in the subjects they were studying.

The findings also highlight the need for improving the interface between secondary school and college. Clearly, a number of secondary school students were not sufficiently prepared for college study. The large gap from an examination-oriented style of learning to a wide range of independent learning styles poses difficulties to many first-year college students. It is very likely that they need more skills training in terms of note taking, working in groups, and researching to assume independence in the learning process.

Another area that requires attention is the amount of workload. More than half of the interviewees indicated that they were overwhelmed by the vast amount of work. If the workload issues are not seriously considered and resolved, students can only choose to focus on academic activities and give up other student activities. If students cannot afford time and effort to ponder and explore what college education means to them, then how they can maximize their benefits from college attendance will remain unexplained.

Chapter 7

Summary and Discussion

7.1 Aims of the study and the research questions

The primary goal of the current study is to investigate how associate degree students face the transition from high school to higher education, and to examine the factors that are critical to the adaptation to university life. The ultimate purpose of the study is to explore how the transition to high education can be improved, with the subsidiary objective of understanding what students are looking for in college education and how they perceive academic success. The information obtained will provide valuable insight to inform the formulation of academic structure and curriculum, which hopefully will enhance student success in their education career. This thesis has attempted to address the following issues in relation to student transition to college:

a) changes and problems encountered by students in their first year of college;
b) key factors contributing to successful transition to college;
c) students' expectations of college education; and
d) students' perceptions of academic success.

7.2 Overview of data collection

This thesis started with a preparatory study in October 2002 to identify student concerns relating to the school to college transition through five focus group meetings with twenty-one students. A questionnaire survey of three hundred students was undertaken in the following February to examine the general adaptation

problems and factors, which are critical to college life. Twenty-four face-to-face interviews were carried out in the summer of 2007 to further probe the adaptation issues uncovered in the questionnaire survey and to understand the transition experiences of individual students. The interview data were analyzed, with specific attention given to differences of gender, discipline of study, academic performance (i.e. GPA), and university entry score. Table 41 below gives an overview of the data collected for the current study.

Table 41: Overview of data collection

Year/Month	Method	Subjects	Purpose
2002 October	Focus group discussions	21 associate degree students who were in the first semester of their final year of study	To identify general issues relating to the school to college transition
2003 February	Questionnaire survey	About 300 associate degree students who completed the first semester in their first year college	• To explore adaptation problems from the academic, social, personal, and institutional perspectives • To identify factors that are critical to college life
2007 summer	Face-to-face interviews	24 associate degree students who completed the first year of study	• To collect accounts of transition experiences and strategies from individual students • To examine students' views of academic success

7.3 Major findings of the study

This section aims to summarize the major findings of this thesis in relation to the four research questions stated in paragraph 7.1 in the above. It will start with a summary of the transition problems faced by the students and the changes they made to adjust to the new learning environment. Next will be a discussion of the critical

factors affecting students' perceptions of college life. Then the discussion will turn to the findings related to students' social adjustments, their expectations of college education, and finally students' views of academic success.

7.3.1 Problems in the school to college transition

This thesis adopted the adaptation model of Baker and Siryk (1989) to analyze the problems in relation to the school to college transition by examining students' academic, social, personal and overall adjustments. Students' academic adjustment to college was examined by students' assessment of learning difficulties and barriers, preference for the medium of instruction, identification of effective learning methods, choices for assistance when facing study problems, and also motivation for learning.

Among the learning difficulties specified, workload was regarded as a major concern. Almost two-thirds of the survey respondents indicated that they felt overwhelmed by the amount of work required (Table 7, p. 89). The workload issue was further explored in the interviews with twenty-four students. Half of the interviewees considered their workload to be heavy. Transmitting a vast amount of information to students does not mean effective teaching. An overloaded curriculum is an insidious obstacle to independent learning (McInnis & James, 1995). Kember (2004) contended that a reciprocal relationship exists between students' perceptions of workload and a surface study approach. He added that students' perceptions are influenced by several social dimensions, such as course difficulty, type of assessment, and student–student and teacher–student relationships. Among the interviewees who found the workload of their study programme to be heavy, three quarters were from the Department of Building Science. This result implies that there may be a relationship between students' perceptions of workload and the discipline of study.

The issue of workload is an interesting topic for further investigation as it affects not only the quality of students' overall college education but also influences their approaches and attitudes to the academic study in general.

Related to the issue of learning difficulties are the barriers to learning. Four major learning barriers were identified in the survey. They are "time management skills" (82%), "study skills" (80%), "motivation" (78%), and "language ability" (75%) (Table 8, p. 89). Views on learning barriers were further explored in the student interviews. The interviewees were asked about the sufficiency of their academic skills required for higher education. Again many of them considered their English language skills as inadequate to meet the academic demands. The interviewees also cited other concerns that included learner autonomy, information management, and group work. They claimed that they had not been given sufficient training for these skills in their secondary school years, and found themselves wanting in the necessary skills to work in group projects, synthesize information from multiple sources, and get through a vast amount of reading materials. They further added that they came from a structured and closely supervised learning environment, and therefore, they found it difficult to manage their learning solely on their own.

Students' preference for the medium of instruction highlights the fact that many students' English skills are insufficient for them to follow lectures, tutorials and seminars adequately if they are delivered in English, as close to two-thirds of the respondents preferred them to be conducted bilingually in English and Cantonese (Table 10, p. 91). Given that close to one-third of the survey participants considered that their English language proficiency was below average (Table 11, p. 92), it is obvious that students need more intensive English training in their primary and

secondary years, because English language competence will definitely affect their performance in college and will have an enduring effect on their career beyond the college years, as English language ability has been identified as one of the most important abilities that employers look for (Ewell, 2006). Moreover, more than half of the survey respondents reported no improvement in their English language ability after one semester in college and 13% found their English proficiency to be poorer (Table 11, p. 92). However, 81% of the respondents were not required to take the English enhancement course (Table 12, p. 92). This finding suggests that the problem relating to students' English language competence has not been properly addressed.

"Individual/small group teaching" (81%), and "real word examples and case studies" (76%) were identified as the most effective learning methods. Although the students found themselves lacking the group work skills, "group work" was rated by 67% of the respondents as an effective learning method (Table 13, p. 93). This finding points to the importance of offering adequate support to enhance students' group work skills, since the group approach to learning is widely used in higher education. Comparatively, large class lecturing and online learning were less popular with the students.

When facing learning or study problems, 92% of the survey respondents would seek assistance from their classmates, and only one-third of them would make use of the structural provision of the college such as year tutors (Table 15, p. 94). About 19% of the respondents attended the English enhancement course (Table 12, p. 92), and only 22% indicated that they planned to take the course designed to improve their academic skills (Table 9, p. 90). Some interviewees who had experience with

the learning support programmes expressed doubts about their relevance and usefulness.

The sample of this study had a strong motivation to do well in their course because they needed to obtain a high GPA to be considered for a top-up degree programme funded by the government. Most of them (90%) indicated they would enroll in a degree programme (Table 6, p. 87) after obtaining the associate degree. They considered that “to gain an academic/profession qualification” (95%), and “to get training for a specific job” (86%) were important reasons for them to obtain higher education (Table 16, p. 96). Students were not motivated only by extrinsic reasons, as they also highlighted the importance of engaging in a study programme that matches with their interests and aptitude. “To develop talents and abilities” (90%), and “to study a field that really interests you” (80%) are also important criteria when they came to a decision for a study programme (Table 16, p. 96). The findings point to the importance of supporting students to make a right programme choice.

Social adaptation was evaluated by analyzing students’ pattern of time spent, relationships with peers and teachers, and involvement in campus activities. On the surface, students in the current study seemed to be satisfied with the social environment of the college. Up to 76% of the survey respondents indicated that they enjoyed campus life (Table 6, p. 87); 93% were able to make new friendships (Table 19, p. 100); 65% considered their relationships with other students to be good or very good (Table 19, p. 100); and 60% rated the teaching quality as good or excellent (Table 6, p. 87). However, these findings do not necessarily support that students have been well integrated into the social system of the college, because the survey reveals that students’ campus activities were mainly associated with their

academic study; student–teacher interaction was less than frequent; peer interaction was confined to small groups; and involvement in extra-curricular activities was minimal. Some students appeared to be more interested in maintaining high school affiliations rather than making new friends in college, and they expressed satisfaction with socializing with a small group of students. Several interviewees indicated that they wished to expand their social circle, and attached a high value to the necessity of establishing social networks during the college years. However, most of them did not appear to have taken proactive steps to integrate into the broader social context of the college environment. This finding points to a contradiction. On the one hand, students wanted a vibrant and eventful college experience. Yet on the other hand, they admitted that they were too lazy to be on the lookout for new opportunities.

Personal adaptation to college was assessed by students' self-evaluation of their abilities and development made after one semester in college. The survey findings show that the majority of the respondents perceived their abilities as average or above average. More than one-third of the survey respondents rated themselves as being better than the others in the domains of generic skills, self-management skills (except time management skills), and people skills, as well as common sense (Table 21, p. 102). A correlation analysis was made between students' self-assessment of abilities and their perceived development. The respondents, who reported higher personal development, had higher self-concept of their abilities, and vice versa (Table 25, p. 106). Similarly, a contrast was observed between the high and low performers in the interviews in terms of their attitudes towards and assessment of the college's provisions in support of student learning. The high performers in general were more positive towards the overall environment of college and more receptive to the academic support programme. They tended to agree that they had been given

adequate support for study, and expressed satisfaction with the support provided, whereas the low performers seldom made use of the academic support available and reported more negative strategies to handle the academic demands.

The overall attachment to the institution was measured by students' satisfaction with campus life and the choice of study programme. Three out of four respondents conveyed satisfaction with their campus life, and acknowledged engaging in a course of their own interest (Table 6, p. 87). A right programme choice has a profound effect on the overall attachment of students to the institution. "Higher education choice", which was related to reasons for entering tertiary education and choice of study programme, is one of the four factors found to be associated with students' perception of college environment (Table 34, p. 115). The ANOVA result also reveals a correlation between students' choice of programme and their GPA (Table 30, p. 110). Three low performers in the interviews attributed their low performance to a wrong choice of programme. These findings highlight the need to help students make informed choice of study programme that matches with their interests and aptitude.

7.3.2 Changes made to cope with the transition

Changes that students made in their attitudes and study approaches to cope with the school to college transition were explored in the interviews. Most of the interviewees were able to articulate the differences between secondary school and college learning, but less than half of the participants (i.e. eleven out of twenty-four students) admitted that they adjusted their study approaches to cope with their studies. In general, the students in the study considered that they were closely guided by their teachers in secondary school and they had to work independently in college. Many of them found this change a big challenge, as they lacked the expertise and

experience in managing their learning autonomously. The strategies they adopted to manage the situation is to work harder by reading more and looking for more learning resources. Therefore, the most frequently cited changes made were doing extra readings and using the Internet for research.

The survey results are in line with the interview findings. The questionnaire survey reveals that not many students had taken proactive steps to make changes or find opportunities to improve themselves in areas where they needed improvement. Take the study skills, for example. A sizeable group of students identified study skills as a learning barrier (Table 8, p. 89). However, not many of them reacted proactively to strengthen their competence in this respect despite the availability of training opportunities, as 78% of them indicated they did not take or planned to take the course designed to enhance students' academic skills (Table 9, p. 90). Students appeared to be very passive in the learning process. Instead of taking proactive actions, many of them just gave up the learning opportunities outside their academic study, because they believed that the more time they spent on their studies, the better their chance of achieving good results.

7.3.3 Critical factors in the adaptation to college life

Based on the broad dimensions of the questionnaire items, nine aggregated variables representing the indices of college life were developed to examine the critical factors affecting students' adaptation to college life. These variables covered the major dimensions of college life, including students' self-evaluation of abilities and development, patterns of time spent, learning activities, methods and obstacles, goals for higher education, selection of study programme, and assessment of social environment. The underlying relationships among these nine variables and students' background characteristics were examined by a series of ANOVA analyses.

Perceived teaching quality was correlated to students' assessment of their own abilities and personal development and their evaluation of effective teaching methods. Enjoyment of campus life was associated with students' evaluation of their abilities and personal development. Programme choice was correlated with the academic performance of students. Finally, English grades obtained in the two public examinations including the secondary school leaving examination and the university entrance examination were associated with students' decision to enter university, and were related to their GPA. Certificate Level English grade was associated with the students' choice of study programme.

Factor analysis was then carried out to identify the factors that are critical to students' perceptions of college life. Four factors were found to be influential in students' perceptions of college life. The first factor was personal orientation, which was related to students' self-concept and personal development. The second factor was choice of higher education, which was related to students' reasons for obtaining higher education and their choice of study programme. The third factor was campus life, which was related to students' satisfaction with campus life. Lastly, the learning style factor was specified, which pertained to students' learning activities, learning methods, patterns of time spent, and learning barriers.

The results highlight the importance of positive self-concept, right programme choice, agreeable campus life, and effective learning approach in students' adaptation to college.

7.3.4 Expectations of college education

The students in the current study were doing an associate degree; thus, all of them shared the common goal of entering a bachelor's degree programme. With regard to the ultimate goal of college attendance, more than half of the interviewees

considered college education as preparation for employment. They perceived a degree as a passport to gaining access to a high-paying and high-status job opportunity. Some interviewees indicated the expectations of establishing social networks and exploring one's potential. On a positive note, some interviewees identified the importance of soft skills development, and aspired to develop themselves in a holistic manner.

However, there were gaps between students' expectations of college education and their actual experiences. Half of the interviewees expected to have plenty of opportunities to widen their experiences and to live a carefree college life with a high degree of personal freedom. In reality, many of them were dragged down by the academic demands and were unable to derive the benefits of higher education, because they chose to give up opportunities for learning experience outside of their academic study.

7.3.5 Perceptions of academic success

Students' perceptions of academic success were examined in the interviews with twenty-four students. Two popular views of academic success were identified: one view related to the acquisition of learning, and the other to the development and enhancement of personal qualities. Most of the interviewees were able to define academic success from a broader perspective. Those who considered that college is a place for knowledge acquisition highlighted the importance of learning with understanding and application of knowledge. The majority reported that they were aware that soft skills development is as important as knowledge acquisition during the college years. Some interviewees emphasized the need to develop critical thinking and other soft skills, although many of them were unclear about how they could achieve these goals. The interviewees appeared to be aware that today's

employers are looking for intrinsic qualities, such as a positive attitude, a strong work ethic, and soft skills like working in teams, thinking strategically, and solving problems creatively. They agreed that college success goes far beyond obtaining good grades.

7.4 Conclusions and recommendations

What emerges from the current study is a picture in which many students struggle to adjust to their college study while they are suffering from a lack of academic skills required for higher education, a realistic understanding of the teaching and learning mode in college, and adequate English language skills. They were, in fact, rather detached from the social environment of the college in a sense that they seldom participated in campus activities and their interaction with teachers and peers was limited. Their involvement in the college is mainly concerned with academic activities. What can be concluded is that both academic and social adjustments of students are problematic. Most of the students admitted they were underprepared for higher education. They were more conscious of their academic inadequacy, but fewer of them were aware of their insufficient social involvement. They, in general, noticed that their academic preparedness was problematic, and their academic skills were insufficient to meet the demands of their studies. They were willing to put in more effort and time to their studies, although they did not appear to know how to improve their competence and skills, and where to seek help. Some of them questioned the quality and relevance of the support offered by the institution.

In fact, most of the transition problems cited in the present study are not specific to the sample of the study. They are common problems faced by many other first-year students in the other part of the world. Issues such as academic

preparedness, workload, new teaching and learning mode, and learner autonomy have been identified and discussed in Chapter 1 (The Problem Statement) and Chapter 2 (Literature Review). The issue that is specific to Hong Kong students is English language competency. To most of the Hong Kong students, English is the second language. Since English is the official medium of instruction in Hong Kong universities, an insufficient level of English will adversely affect students' academic performance and achievement.

As revealed in students' pattern of time spent, their involvement in extra-curricular activities, and the frequency of student–teacher and student–student interactions, students' social adjustments are also problematic. However, this issue has not been properly attended to by either students or the institution. Most of the students neglected the fact that they were rather disengaged from the social environment of the college, and underestimated the value of social integration in the overall quality of college education. While the current emphasis of education is on generic skills development, a lack of social integration will hinder students' all-rounded development.

It is obvious that students' academic and social integrations need to be strengthened. Intervention from the institution is necessary if students' academic and social integrations are to be promoted. Tinto (2006) suggested that institutions should create five conditions to facilitate students' involvement in the academic and social environment of the college. Tinto's five conditions are *commitment*, *expectations*, *support*, *feedback*, and *involvement*. In short, Tinto considers that institutions have to commit human, physical, and financial resources to provide better support to students, and to plan and implement policies that are conducive to student growth and learning, hold high and clear expectations for student

achievement, provide relevant and adequate academic, social and financial support, put in place a feedback system to identify early enough what is needed to improve the learning situation and assist students at risk, and finally, to involve students in the college environment academically and socially. Tinto believes that these five conditions together will provide students with an effective environment for growth and learning. Tinto's five conditions are proposed from the perspective of what an institution would do to improve its infrastructure and provisions in support of student involvement. The idea is not new, but may serve as the guiding principle when support and interventions are planned. In fact, most institutions nowadays have committed resources to student support services and have some kind of feedback system in place, although the focus and scope may differ among institutions. Take the college featured in the current study, for example. There are different types of student support services in place such as courses for enhancing students' English and learning skills, the supplemental instruction scheme, the mentoring scheme, orientation activities, student counseling services, and self-improvement programmes. However, most of the students in the study indicated that they did not take advantage of the learning opportunities available. As mentioned in paragraph 7.3.2, up to 81% of students were not required to take the English enhancement course, and 78% of the students did not attend or did not plan to attend the course for learning enhancement. What is revealed here is that the institution has committed resources to provide support to students, but the utilization of the support services is very low. The implication is that what is provided may not be connected to the learning needs of students. Institutions should put in place a mechanism to evaluate the relevance of the strategies and programmes in support of student learning as they

may not be effective or relevant to the needs of students, or they are not provided in the best form that will benefit students.

In the following discussion, the investigator will attempt to make several recommendations to ease students' transition to college through measures in support of students' academic and social integrations into the college environment.

7.4.1 Measures to promote students' academic adaptation

One major difficulty that freshmen face in their first year is the abrupt change from a closely supervised learning situation to an open learning environment, where they are expected to take control of their own learning, such as having to decide on their electives, schedule their timetable, form groups to undertake projects, and to monitor their own progress. Many students in this study admitted they were not prepared for such responsibilities due to a lack of awareness of the emphasis and demands of the new learning environment. Aside from putting in more time to their studies, they appeared to be lacking the direction and strategies to handle the changes required. It is obvious that students' readiness for higher education is problematic. Most of them are not ready to assume an autonomous role in learning. The investigator, therefore, considers that the first and foremost condition to ease students' academic adjustment is to help students develop learner autonomy through curriculum design and delivery.

The major issue of academic adaptation is that much is assumed and little is explicitly stated. Students are assumed to migrate to an independent learning environment from a highly supportive environment automatically, and then they are left to sink or swim. Although a variety of academic support is provided to students, most of the support services are offered separately from the curriculum as independent entities, and it is up to students' decision to use them. As revealed in the

current study, most of the students did not take advantage of such type of provisions. One possible explanation is that they already found the workload difficult to adjust to and did not manage to do extra work outside the normal curriculum. Those, who used such services, did not comment favorably on their effectiveness. Since the utilization of these services is low, their real benefits are very difficult to measure. The investigator considers that it will be more effective to take an integrated approach to promote academic integration by developing learner autonomy through curriculum design instead of offering academic support as a separate entity.

About five to six years ago, the Hong Kong government began to encourage the higher education sectors to adopt an outcome-based approach as a strategy to promote student learning. The central idea of an outcome-based approach is to make learning explicit to students. What students are expected to learn and what level of learning they are expected to achieve are clearly set. Biggs' (1999) theory of constructive alignment provides a framework for applying the outcome-based approach to programme design and delivery. In essence, Biggs' model of constructive alignment consists of three major components. The core of the model is a set of intended learning outcomes (ILOs) denoting what students are expected to achieve at the end of a unit of study. These ILOs inform students of what they are expected to learn and to achieve in a unit of study. Based on the ILOs, teaching, learning, and assessment activities are designed to help students achieve the outcomes, as well as tell them how well they are performing on these outcomes. The key to course design is to have these three components (i.e. learning outcomes, learning activities, and assessment tasks) constructively aligned to one another. Under an outcome-based curriculum, students are explicitly told what they are expected to achieve at the completion of the study unit, and they are guided along the

learning process through the teaching and learning activities designed for the achievements of the ILOs. Thus, students are in a better position to take control of their studies instead of relying on the supervision of their teachers. The assessment of student learning in an outcome-based course is criterion-referenced. Students are assessed according to how well they have met the ILOs against a set of criteria. Assessment is also a learning process itself to let students know where they are now and where they should go next to attain the learning outcomes of a course or a programme (Biggs & Tang, 2003, pp. 54–5).

The outcome-based curriculum clearly sets and communicates the expectations on students in the form of learning outcomes. The adoption of criterion-referenced assessment makes the assessment criteria and process more transparent and communicative. An outcome-based curriculum brings out a focus on what students need to learn, and also a pathway for students to achieve the results.

Since managing the academic study autonomously is a major challenge that students need to face in their transition to college, a curriculum based on outcomes will help them clarify the expectations and the results of learning, as well as the standards of achievements. Working under an outcome-based curriculum, students are well informed of what they need to learn, how well they have achieved, and where they need to go next.

To implement the outcome-based approach, many universities in Hong Kong have begun to decide on the attributes they expect from their ideal graduates. The ideal graduate attributes serve as the highest level of outcomes for student learning. Based on these ideal graduate attributes, outcomes for individual programmes and courses are then designed to set a pathway for the attainment of these attributes. The attributes of ideal graduates in a way reflect institutions'

definition of academic success. The concept of ideal graduates also conveys to students that generic competences are as important as subject expertise. Some interviewees also highlighted the need for developing generic skills during the college years.

Aside from developing learner autonomy at the curriculum level, another strategy to promote students' autonomous skills is to develop students as reflective learners. Students should be encouraged to undertake self-reflection on their learning regularly so as to identify where they are now and what to do next. The scope of reflection may extend beyond academic attainment to include other aspects of development, such as abilities in self-management, interpersonal relations, civic mindedness, and moral responsibility. Students should also be encouraged to undertake analyses of their learning style to identify the most suitable study approaches. These suggestions are intended to raise students' awareness of their role and responsibilities in the learning process.

7.4.2 Measures to promote students' social integration

The findings of the present study show that many students appeared to be disengaged from the social system of the college they were attending. Only a few students in this study reported active involvement in student activities. Their social involvement with teachers and peers is also limited. The investigator is of the view that more structured opportunities should be planned if students' social integration is to be promoted.

Teachers and peers are the socializing agents who play the most important and pervasive role in promoting student learning and development (Tam, 2002). Students in the current study indicated that they preferred to seek support from peers when facing learning or study problems, but they also reported that they seldom

interacted with their teachers outside of class. Research on student retention and persistence suggests that interaction with teachers has a positive relation with students' self-report of progress in the intellectual and affective domains. Students having frequent interactions with teachers are more likely to express satisfaction with all aspects of their college experience. Frequent student–teacher interaction is more strongly related to satisfaction with college than any other type of involvement (Astin, 1999, p. 525). Comparatively speaking, American students seem to interact more frequently with their teachers. The 2009 national aggregate findings of the Your First College Year (YFCY) Survey indicated that 27.3% and 24.3% of the respondents reported at least a weekly interaction with their professors during office hours and outside of class, respectively. Hong Kong students apparently hold a rather traditional view towards student–teacher relationship, because they believe that student–teacher interaction has to occur in the classroom and during class time. The survey findings show that more than 70% of the respondents either never (12%) or seldom (62%) chatted with their teachers outside class time, and 56% seldom and 11% never consulted their teachers after class (Table 20, p. 100). Apparently, the student–teacher interaction needs to be strengthened. Institutions may consider implementing strategies such as the campus tutor system and academic advising programmes to encourage more student–teacher interaction outside of class.

Group work was considered to be an effective learning method by a sizeable group of student in the survey, but students also expressed a concern about group work skills. A number of the interviewees raised the issue of working in groups and reported some negative group work experiences. Tinto's idea of "learning communities" seems to be a practical way to implement group work among students. The primary aim of a learning community is to provide the advantages of

traditionally small cohesive groups of students moving together through their courses as a cohort (Tinto, 2006). Learning communities may take different forms, and they are normally grouped around subject themes. Another strategy to support social integration is to institute a compulsory residential policy for associate degree students. Students who live in residence halls will surely have more opportunities to get involved in different aspects of college life, as well as to interact with students from other years and disciplines of study. Living in a campus residence is a strong environment factor in promoting student persistence in college. Moreover, resident students seem to be more satisfied with their college experience, particularly in the areas of student friendships, faculty–student relations, institutional reputation, and social life (Astin, 1999, p. 525).

Students in the present study were found to be very indifferent towards joining extra-curricular activities. One reason may be due to their being overwhelmed by the excessive academic demands and their inability to spare time and energy for other activities. More importantly, students may not be able to recognize the value of extra-curricular activities from which they may also gain a valuable learning experience. Astin (1999) pointed out that participation in extra-curricular activities would facilitate students' integration into the social and academic systems of their institution. Therefore, institutions should consider organizing appropriate extra-curricular activities for students and encourage their participation, or embedding extra-curricular activities into the formal curriculum. To provide students with better incentives, their participation and attainment, such as awards and scholarships in these activities, have to be documented and included in their achievement record.

This research is intended to raise our awareness, and extend our understanding of the transition issues. Evidence from the present study supports that associate degree students are confronted with a number of transition problems, including inadequate academic and language skills, little understanding of the college learning environment, insufficient preparation for higher education, and limited experience in independent learning. These transition problems should better be addressed at the institutional level because there are implications for resources.

7.5 Theoretical, methodological, and practical implications

This study aims to enhance the understanding of the transition process from high school to higher education. Attempts have been made to analyze students' transition experiences from the academic, social, personal, and institutional perspectives and to identify the transition problems with reference to student involvement and integration theories. Attempts have been made to uncover the factors affecting students' perceptions of college life. The four factors identified, namely "personal orientation", "higher education choice", "campus life", and "learning style" represent important dimensions of college life. It is hoped that this study will serve a basis for further study on indices of higher education for assessing the quality of college life, and predicting positive and negative transition. Another implication of this study is that the quality of teaching can serve as an indicator of an institution's effectiveness in promoting student learning. This claim is made because students' perceptions of the learning environment are found to be associated with how they perceive the teaching quality, which is also related to students' self-assessment of abilities and personal development.

This study has adopted a mixed methods design combining both the quantitative and qualitative methods. This approach is considered to be appropriate for a study of this kind because the quantitative approach helps to cast light on the overall scene of student adaptation, while the qualitative approach helps to tap into the themes or specific issues identified. Moreover, this study has attempted to understand the school to college transition from the perspective of students. The whole picture would be more vivid and comprehensive if the study could be extended to also include teachers' views about the adaptation issues.

Several practical implications can be drawn from this study. First, the results of this study have confirmed that many first-year students do not have an adequate awareness of the differences between high school and college in terms of how learning is structured and what is expected of them as independent learners when they commence higher education. A better understanding of the differences between the two in both academic and social areas will surely help students better prepare for the changes they are expected to undergo and raise their chances for success. Helping students understand how college is different from high school, and how they can prepare for the change, should start prior to their arrival on campus. Systematic transition planning should begin early in high school and continue into college. Better collaboration between high school and college is therefore necessary. The interface between high school and college should focus on changes that students may expect in the college setting, and the best way for them to prepare for those changes.

Second, the role of staff members in promoting successful transition should never be neglected since they are on the frontline to help students adapt to the new environment. They should be reminded of the characteristics of the entering students,

the skills that these entering students need to develop to handle the demands of the new environment, the effect of in- and out-of-class student–teacher interaction, and students' learning experiences in secondary school. If the teaching quality is to be improved, the teachers need to understand the learning needs of students and then design instruction to meet those needs (Felder and Brent, 2005). A better understanding of their students and the transition process will enable staff members to make informed choices about the skills and attributes that their students need to develop for their discipline of study, and to create a learning experience that is better suited to their students.

7.6 Directions for future research

The current study has generated several ideas for further investigations. One possible research area is to investigate the effect of transition on students' academic attainment, perceived development, and college success. This inquiry can be pursued by undertaking follow-up studies with the sample about their academic attainment, as well as their self-assessment of development and success when they graduate. The purpose is to identify the relationship between students' transition experiences and their perceived achievements.

Another area for future research is to replicate the current research with larger samples of students, with the aim of creating indices to predict positive and negative transition. The practical value of studies of this kind is to help identify students at risk so that support can be provided early enough to make a difference. Moreover, with a wider range of data on specific student experiences of transition, institutions will be in a better position to make relevant predictions about the transition issues, and to develop more effective strategies to address them.

Students' transition experiences can also be investigated from a longitudinal perspective, so that change over time can be studied in a systematic manner. A longitudinal study will also allow more information about the school to college transition to be assessed.

The current study has revealed a number of problematic areas requiring special attention, such as the issues of workload and group work. Studies can be planned to further explore these issues, as they may have a direct impact on the quality of student learning. Another interesting research topic is a comparative study of the high and the lower performers in their transition to college, as a contrast was observed between the high and the low performers in their perceptions of the learning environment, and their management of learning.

7.7 Strengths and limitations of the study

The current study is an attempt to understand students' first year experience from the perspective of the school to college transition. It has applied a model to analyze student transition in terms of the academic, social, personal, and institutional aspects. This model provides a workable framework to understand the issues of student transition.

With reference to an established instrument used for western studies and taking into account of the concerns of local students, two instruments have been developed to explore the topic of interest from both qualitative and quantitative perspectives. These two instruments, although they were designed to be used with associate degree students, can also be applied to full degree students to understand their experiences in the transition to college.

This study has suggested a method to summarize the quantitative data into broader dimensions to identify key factors contributing to successful adaptation to college life. Future research on similar topics may follow the same methodology or refine it to suit specific purposes.

A limitation of the current study is that only one sample was examined, thus affecting the generalizability of this research. If this study were replicated to more samples, the findings generated from the study could be confirmed with higher confidence. Another merit of replicating the study is that the instruments developed specifically for this research could be further refined, and their reliability and validity could be established.

7.8 Final remarks

The intent underpinning this research is to examine the issues of student transition to college study, with the ultimate goal of exploring ways that may maximize the chances of student success. Undoubtedly there are students who may have insufficient preparation for the rigor of university study and need more training for the academic skills required for college study.

To facilitate successful transition from school to college, institutions should plan an overall orientation strategy, which should be sensitive to the transition process that students in their first year study have to undergo. Aside from putting in place orientation programmes specially designed to provide essential information on both academic and social aspects of the college environment, such as assessment systems, course advice, programme administration, and student support services and resources, institutions should also consider activities and provisions that go beyond information-giving and experience-sharing. There are various programmes that

institutions may develop to facilitate student transition to college study as many students are wanting in more sophisticated academic skills for higher education. For example, some new students may be interested to attend seminars or workshops to enhance their skills in note-taking, information management, and group work, before the academic year commences. The early orientation programme should be supplemented with on-going activities that enable students to receive advice and guidance on the academic and social aspects of their college life, as well as personal goal setting throughout their time at college.

College should not be regarded as yet another institution that provides students with technical skills. Instead, it should prepare them for a lifelong journey of survival. College education should equip students with knowledge and skills beyond what they can find in books, such as self-sufficiency, critical thinking, and interpersonal skills. A comprehensive academic programme should encompass both hard and soft skills development. The implementation of a four-year degree curriculum in 2012 provides a good opportunity for institutions in Hong Kong to embed the development of students' generic competences in the new curriculum, and develop practices to facilitate students' acquisition of generic knowledge and skills.

The key to successful transition to college is to engage in the college environment both academically and socially. As Shulman (2002) asserts, "Learning begins with student engagement, which in turn leads to knowledge and understanding." (p. 38)

- End of thesis -

Appendix A Focus Group Discussion Plan

1. When you first came to this university, did you encounter any problems which you think had some impact on your time here?

2. What is your goal of entering higher education? For example, to develop oneself, to fulfill academic needs, to prepare for a particular career, or for some other reasons? How well have your expectations been met so far?

3. How do you describe your study approach? In particular,
   a. What do you see as your major barriers to your studies?
   b. What events/activities/people really help your learning?
   c. What events/activities/people hinder your learning?
   d. What support would you like to have from your home department/the university?

4. How do you think about the teaching quality of your study programme?

5. Do feel you have learnt/gained since you entered university so far? Please elaborate.

6. What do you know now that you wish you knew at the start of your study programme in this university?

7. What advice would you like to give to new students that you think will help them become successful in their education career?

Appendix B Aggregated Variables

Self-concept is specified by the following:	**Personal development** is specified by the following:
Academic skills 1. English language ability 2. Communication skills in writing 3. Public speaking skills 4. Reading speed/comprehension 5. Mathematical skills 6. Computer skills 7. Study skills 8. Ability to learn on your own effectively Generic skills 9. Creativity 10. Ability to think critically 11. Problem-solving skills 12. Organizational skills Self-management skills 13. Ability to work independently 14. Time management skills 15. Self-confidence 16. Persistence 17. Ability to adapt to change People skills 18. Ability to work in a team 19. Leadership ability 20. Interpersonal skills Knowledge 21. Common sense/General knowledge 22. Current affairs knowledge	Academic skills 1. English language ability 2. Communication skills in writing 3. Public speaking skills 4. Reading speed/comprehension 5. Mathematical skills 6. Computer skills 7. Study skills 8. Ability to learn on your own effectively Generic skills 9. Creativity 10. Ability to think critically 11. Problem-solving skills 12. Organizational skills Self-management skills 13. Ability to work independently 14. Time management skills 15. Self-confidence 16. Persistence 17. Ability to adapt to change People skills 18. Ability to work in a team 19. Leadership ability 20. Interpersonal skills Knowledge 21. Common sense/General knowledge 22. Current affairs knowledge 23. Subject knowledge
Time spent includes:	**Frequency in learning activities** includes:
University-related activities 1. Lecture/seminar/tutorial/ laboratory session 2. Individual academic work/study 3. Group academic work/study 4. Participating in student societies/activities 5. Organizing student societies/activities Job/Household duty/Community services 6. Part-time work 7. Housework 8. Volunteer work 9. Religious services/activities Socializing activities 10. Socializing with friends 11. Listening to music 12. Shopping	Interactive learning 1. discuss course content with other students outside of class 2. study with other students 3. consult teaching staff outside of class 4. work on group projects Handling of academic demands 5. fail to complete homework on time 6. miss class due to part time job 7. miss class to meet an assignment deadline 8. feel bored in class 9. feel overwhelmed by coursework/assignments 10. find it difficult to follow lectures Effort paid 11. participate in class discussion

13. Exercising/Sports 14. Watching TV/video 15. Cinema/Concert 16. Reading for pleasure 17. Playing video/computer games 18. ICQ/Internet Chat room 19. Navigating WWW/Internet	12. do additional readings on topics taught in class 13. search for information on the Internet 14. go to library to find relevant information
Effective learning methods include:	**Barriers to learning** include
1. Class discussions 2. Group work 3. Individual work 4. Class presentations 5. Large group lecturing 6. Individual/small group teaching 7. Discussing work with other students outside of class 8. Discussing work with staff members outside of class 9. Online learning 10. Work placement 11. Visits and fieldtrips 12. Real world examples and case studies.	1. Your language ability 2. Your study skills 3. Your time management skills 4. Your motivation 5. Insufficient library facilities 6. Inadequate computing facilities 7. Class size is too large
Reasons for entering tertiary education relate to:	**Choice of study programme** relates to:
1. To gain an academic/professional qualification 2. To fulfill parents' expectations 3. You find it still too early to join the work force at your age 4. You find your qualifications restricting your search for jobs of promising prospects 5. To study a field that really interests you 6. To receive training for a specific job/profession 7. To develop talents and abilities 8. To experience university life 9. To contribute more to society	1. Being interested in the programme 2. Having the ability to do well in the programme 3. The programme offers good career prospects 4. The programme has a good academic reputation 5. Public examination results
Social Environment includes	
1. Are you a member of the Student Union or any other student clubs or societies? 2. Have you joined any activities organized by the Student Union, clubs or societies? 3. Have you joined any programmes/activities organized by the Student Development Services? 4. Have you joined the Student Mentoring Scheme? 5. How often do you chat with the teaching staff outside of class? 6. How often do you ask a teacher for advice after class? 7. Are you able to make new friendships? 8. How would you rate your relationships with other students	

Appendix C Questionnaire

Dear student,

You are cordially invited to participate in a questionnaire survey, which is part of a doctoral study investigating how well students in Associate Degree Programmes have adapted to the tertiary education environment. Findings will shed light on the resources and provisions that Associate Degree students are in need of in order to be successful in their study. By filling out this questionnaire, you will get an opportunity to reflect on your experience in the last few months, which may help you identify ways to get the most of your time here.

This questionnaire is now posted at http://www.XXX.hk until *17 February 2003*. The first 100 respondents will receive a food coupon as a token of appreciation. All respondents will enter a lucky draw for ten book coupons valued at HK$50 each. Act now!

All responses received from you will be treated in the strictest confidence and used for academic purpose only.

For any questions about this survey, please call Tracy Lo at 3442-XXXX or email her at tracy.lo@XXX.edu.hk.

Thank you.

Yours sincerely,

Tracy Lo

A Survey of First Year Students in Associate Degree Programmes

We request you to log in the system with your student ID in order to make subsequent follow-up studies possible. Please be assured that your responses will be held in the strictest professional confidence. For any questions and concerns about this survey, feel free to call Tracy Lo at 3442-xxxx or email her at tracy.lo@XXX.edu.hk.

Your Student ID

Login

Instructions:

This questionnaire aims to collect information about your experience in the Associate Degree Programme you are attending. Data collected will be used for a doctoral study entitled "From High School to Higher Education: Processes, Changes and Ways to Succeed". Please read each item carefully and select an answer which best reflects your view for each item. Your honest and thoughtful responses will be appreciated.

Thank you.

Background Information							
1	AGE	18 or below (1) ○	19-20 (2) ○	21-22 (3) ○	over 22 (4) ○		
2	Gender	Female (1) ○	Male (2) ○				
3	Programme of study	_____					
4	What is the choice in priority of the study programme you are attending?	1st (1) ○	2nd (2) ○	3rd (3) ○	4th-6th (4) ○	7th-10th (5) ○	11th-14th (6) ○	15th-25th (7) ○
5	Are you required to take any English Language Centre courses?	Yes (1) ○	No (2) ○				
6	Are you doing or do you plan to do the learning enhancement course?	Yes (1) ○	No (2) ○				
7	Do you have a part-time job?	Yes (1) ○	No (2) ○				
8	What grade did you obtain for the following subjects?	(1)	(2)	(3)	(4)		
	Advanced Level English	Distinction (A) ○	Credit (B or C) ○	Pass (D or E) ○	Fail (F or U) ○		
	Advanced Level Chinese	Distinction (A) ○	Credit (B or C) ○	Pass (D or E) ○	Fail (F or U) ○		
	Certificate Level English	Distinction (A) ○	Credit (B or C) ○	Pass (D or E) ○	Fail (F or U) ○		
	Certificate Level Chinese	Distinction (A) ○	Credit (B or C) ○	Pass (D or E) ○	Fail (F or U) ○		
	Certificate Level Maths	Distinction (A) ○	Credit (B or C) ○	Pass (D or E) ○	Fail (F or U) ○		
9	In what year did you first sit for the HKCEE?	_____					
10	In what year did you first sit for the HKALE?	_____					

Self-Concept		(1)	(2)	(3)	(4)	(5)
11	How would you rate yourself on each of the following as compared with the average person of your age?	Much above Average	Above Average	Average	Below Average	Much Below Average
a	*Common sense/General knowledge*	○	○	○	○	○
b	*Current affairs knowledge*	○	○	○	○	○
c	*Ability to work independently*	○	○	○	○	○
d	*Ability to work in a team*	○	○	○	○	○
e	*Creativity*	○	○	○	○	○
f	*Ability to think critically*	○	○	○	○	○
g	*Problem-solving skills*	○	○	○	○	○
h	*Organizational skills*	○	○	○	○	○
i	*Leadership ability*	○	○	○	○	○
j	*Time management skills*	○	○	○	○	○
k	*Interpersonal skills*	○	○	○	○	○
l	*Self-confidence*	○	○	○	○	○
m	*Persistence*	○	○	○	○	○
n	*Ability to adapt to change*	○	○	○	○	○
o	*English language ability*	○	○	○	○	○

p	*Communication skills in writing*	○	○	○	○	○
q	*Public speaking skills*	○	○	○	○	○
r	*Reading speed/comprehension*	○	○	○	○	○
s	*Mathematical skills*	○	○	○	○	○
t	*Computer skills*	○	○	○	○	○
u	*Study skills*	○	○	○	○	○
v	*Ability to learn on your own effectively*	○	○	○	○	○
Personal Development		(1)	(2)	(3)	(4)	(5)
12	Compared with when you first started your Associate Degree Programme, how would you now describe your:	Much Stronger	Stronger	No Change	Weaker	Much Weaker
a	*Common sense/General knowledge*	○	○	○	○	○
b	*Current affairs knowledge*	○	○	○	○	○
c	*Ability to work independently*	○	○	○	○	○
d	*Ability to work in a team*	○	○	○	○	○
e	*Creativity*	○	○	○	○	○
f	*Ability to think critically*	○	○	○	○	○
g	*Problem-solving skills*	○	○	○	○	○
h	*Organizational skills*	○	○	○	○	○
i	*Leadership ability*	○	○	○	○	○
j	*Time management skills*	○	○	○	○	○
k	*Interpersonal skills*	○	○	○	○	○
l	*Self-confidence*	○	○	○	○	○
m	*Persistence*	○	○	○	○	○
n	*Ability to adapt to change*	○	○	○	○	○
o	*English language ability*	○	○	○	○	○
p	*Communicative skills in writing*	○	○	○	○	○
q	*Public speaking skills*	○	○	○	○	○
r	*Reading speed/comprehension*	○	○	○	○	○
s	*Mathematical skills*	○	○	○	○	○
t	*Computer skills*	○	○	○	○	○
u	*Study skills*	○	○	○	○	○
v	*Ability to learn on your own effectively*	○	○	○	○	○
w	*Subject knowledge*	○	○	○	○	○

Time Spent		(1)	(2)	(3)	(4)	(5)	(6)
13	In the last semester how many hours did you spend during a typical week doing the following activities?	None	1-5 hrs	6-10 hrs	11-15 hrs	16-20 hrs	Over 20 hrs
a	*Lectures/seminars/tutorials/laboratory sessions*	○	○	○	○	○	○
b	*Individual academic work/study*	○	○	○	○	○	○
c	*Group academic work/study*	○	○	○	○	○	○
d	*Participating in student societies/activities*	○	○	○	○	○	○
e	*Organizing student societies/activities*	○	○	○	○	○	○
f	*Part-timework*	○	○	○	○	○	○
g	*Housework*	○	○	○	○	○	○
h	*Volunteer work*	○	○	○	○	○	○
i	*Religious services/activities*	○	○	○	○	○	○
j	*Socializing with friends*	○	○	○	○	○	○
k	*Listening to music*	○	○	○	○	○	○
l	*Shopping*	○	○	○	○	○	○
m	*Exercising/Sports*	○	○	○	○	○	○
n	*Watching TV/video*	○	○	○	○	○	○
o	*Cinema/Concert*	○	○	○	○	○	○
p	*Reading for pleasure*	○	○	○	○	○	○
q	*Playing video/computer games*	○	○	○	○	○	○
r	*ICQ/Internet Chat room*	○	○	○	○	○	○
s	*Navigating WWW/Internet*	○	○	○	○	○	○
t	*Other: Please specify*	_____					

Learning		(1)	(2)	(3)	(4)
14	In the last semester, how often did you	Frequently	Occasionally	Seldom	Not at all
a	*discuss course content with other students outside of class*	○	○	○	○
b	*study with other students*	○	○	○	○
c	*consult teaching staff outside of class*	○	○	○	○
d	*work on group projects*	○	○	○	○
e	*fail to complete homework on time*	○	○	○	○
f	*miss class due to part time job*	○	○	○	○
g	*miss class to meet an assignment deadline*	○	○	○	○
h	*feel bored in class*	○	○	○	○
j	*feel overwhelmed by coursework/assignments*	○	○	○	○
j	*participate in class discussion*	○	○	○	○
k	*find it difficult to follow lectures*	○	○	○	○
l	*do additional readings on topics taught in class*	○	○	○	○

m	*search for information on the Internet*	○	○	○	○
n	*go to library to find relevant information*	○	○	○	○
		(1)	(2)	(3)	(4)
15	Rate how effective to you each of the following as a method of learning?	Very Effective	Effective	Quite Effective	Not Effective at all
a	*Class discussions*	○	○	○	○
b	*Group work*	○	○	○	○
c	*Individual work*	○	○	○	○
d	*Class presentations*	○	○	○	○
e	*Large group lecturing*	○	○	○	○
f	*Individual/small group teaching*	○	○	○	○
g	*Discussing work with other students outside of class*	○	○	○	○
h	*Discussing work with staff members outside of class*	○	○	○	○
i	*Online learning*	○	○	○	○
j	*Work placement*	○	○	○	○
k	*Visits and fieldtrips*	○	○	○	○
l	*Real world examples and case studies.*	○	○	○	○
		(1)		(2)	(3)
16	Do you see each of the following as a barrier to your study?	Definitely		Probably	Not at all
a.	*Your language ability*	○		○	○
b.	*Your study skills*	○		○	○
c.	*Your time management skills*	○		○	○
d.	*Your motivation*	○		○	○
e.	*Insufficient library facilities*	○		○	○
f.	*Inadequate computing facilities*	○		○	○
g	*Class size is too large*	○		○	○
h	*Other: please specify*	_____			
17	If you don't understand something about your study, what would you do?	Consult any of the following person(s) □ Subject teachers □ Year tutors □ Mentors □ Classmates □ Senior students □ Counselors □ Friends □ Parents □ Brothers/Sisters □ Try to solve on your own □ Other : _____ ** You can check more than one box.*			

Medium of Instruction		(1)	(2)	(3)
18	Indicate what you feel is the appropriate language to be used in the following situations:	English	Cantonese	English + Cantonese
a.	*Lecture*	○	○	○
b.	*Seminar/laboratory session*	○	○	○
c.	*Tutorial*	○	○	○
d.	*Student presentation*	○	○	○

Social Environment					
19	Are you a member of the Student Union or any other student clubs or societies?	Yes (1) ○	No (2) ○		
20	Have you joined any activities organized by the Student Union, clubs or societies?	Yes (1) ○	No (2) ○		
21	Have you joined any programmes/activities organized by the Student Development Services?	Yes (1) ○	No (2) ○		
22	Have you joined the Student Mentoring Scheme?	Yes (1) ○	No (2) ○		
23	How often do you chat with teaching staff outside of class?	Frequently (1) ○	Occasionally (2) ○	Seldom (3) ○	Not at all (4) ○
24	How often do you ask a teacher for advice after class?	Frequently (1) ○	Occasionally (2) ○	Seldom (3) ○	Not at all (4) ○
25	Are you able to make new friendships?	Yes (1) ○	No (2) ○		
26	How would you rate your relationships with other students?	Very good (1) ○	Good (2) ○	Just Okay (3) ○	Poor (4) ○	Very Poor (5) ○

Reasons for Entering Tertiary Education		(1)	(2)	(3)	(4)
27	In your decision to enter tertiary education, rate how important to you each of the following reasons?	Very Important	Important	Quite Important	Not Important
a.	To gain an academic/professional qualification	○	○	○	○
b.	To fulfill parents' expectations	○	○	○	○
c.	You find it still too early to join the work force at your age	○	○	○	○
d.	You find your qualifications restricting your search for jobs of promising prospects	○	○	○	○
e.	To study a field that really interests you	○	○	○	○
f.	To receive training for a specific job/profession	○	○	○	○
g.	To develop talents and abilities	○	○	○	○
h.	To experience university life	○	○	○	○
i.	To contribute more to society	○	○	○	○

Choice of Study Programme		(1)	(2)	(3)	(4)
28	Indicate the importance to you each of the following in your choice of study programme.	Very Important	Important	Quite Important	Not Important
a.	Being interested in the programme	○	○	○	○

b.	Having the ability to do well in the programme	○		○		○		○
c.	The programme offers good career prospects	○		○		○		○
d.	The programme has a good academic reputation	○		○		○		○
e.	Public examination results	○		○		○		○
Overall								
29	Do you expect to enroll for a degree programme after you graduate from your current AD programme?	Yes (1) ○		No (2) ○				
30	Do you enjoy your campus life so far?	Yes (1) ○		No (2) ○				
31	How would you rate the overall quality of teaching?	Excellent (1) ○	Good (2) ○	Acceptable (3) ○		Poor (4) ○		Very Poor (5) ○
32	If you could make your college choice all over again, would you still choose the same study programme?	Definitely Yes (1) ○	Probably would (2) ○	Probably not (3) ○		Definitely not (4) ○		Don't Know (5) ○
GPA								
33	Mark the option that best describes your grade point average in the last semester.	A 4.3-3.7 (1) ○	3.6-3.4 (2) ○	B 3.3-2.7 (3) ○	2.6-2.3 (4) ○	C 2.2-1.7 (5) ○	1.6-1.1 (6) ○	D 1 (7) ○	F 0 (8) ○

Thank you for your time and assistance!

Questionnaire submitted successfully.

You will be notified to view the data analysis when it is ready. Thank you for your participation.

Some follow-up studies may be conducted after the analysis of data collected via this survey, please check the box below to indicate whether you are happy to be contacted to take part in the subsequent studies. You may withdraw at any time and are not required to give reasons for that and this will not prejudice your study in any way.

Yes □

No □

Thank you.

Appendix D ANOVA Results

ANOVA ALE with

		Sum of Squares	df	Mean Square	F	Sig.
Self-concept	Between Groups	0.35	3	0.12	1.17	0.32
	Within Groups	32.86	328	0.10		
	Total	33.21	331			
Personal development	Between Groups	0.38	3	0.13	1.02	0.38
	Within Groups	40.30	328	0.12		
	Total	40.68	331			
Time spent	Between Groups	0.30	3	0.10	0.26	0.85
	Within Groups	127.60	328	0.39		
	Total	127.91	331			
Frequency in learning activities	Between Groups	0.04	3	0.01	0.13	0.94
	Within Groups	32.93	328	0.10		
	Total	32.97	331			
Effective learning methods	Between Groups	0.11	3	0.04	0.22	0.88
	Within Groups	53.78	328	0.16		
	Total	53.89	331			
Barriers to learning	Between Groups	1.30	3	0.43	2.59	0.05
	Within Groups	55.09	328	0.17		
	Total	56.39	331			
Reasons for entering higher education	Between Groups	2.14	3	0.71	3.90	0.01
	Within Groups	60.08	328	0.18		
	Total	62.23	331			
Choice of study programme	Between Groups	0.29	3	0.10	0.36	0.78
	Within Groups	89.37	328	0.27		
	Total	89.67	331			
Social environment	Between Groups	0.04	3	0.01	0.13	0.91
	Within Groups	31.83	328	0.10		
	Total	32.89	331			

ANOVA ALC with

		Sum of Squares	df	Mean Square	F	Sig.
Self-concept	Between Groups	0.29	3	0.10	0.98	0.40
	Within Groups	32.92	328	0.10		
	Total	33.21	331			
Personal development	Between Groups	0.41	3	0.14	1.12	0.34
	Within Groups	40.26	328	0.12		
	Total	40.68	331			
Time spent	Between Groups	0.44	3	0.15	0.38	0.77
	Within Groups	127.47	328	0.39		
	Total	127.91	331			
Frequency in learning activities	Between Groups	0.62	3	0.21	2.08	0.10
	Within Groups	32.35	328	0.10		
	Total	32.97	331			
Effective learning methods	Between Groups	0.20	3	0.07	0.40	0.75
	Within Groups	53.69	328	0.16		
	Total	53.89	331			
Barriers to learning	Between Groups	0.22	3	0.07	0.44	0.73
	Within Groups	56.17	328	0.17		
	Total	56.39	331			
Reasons for entering higher education	Between Groups	1.27	3	0.42	2.27	0.08
	Within Groups	60.96	328	0.19		
	Total	62.23	331			
Choice of study programme	Between Groups	1.39	3	0.46	1.73	0.16
	Within Groups	88.27	328	0.27		
	Total	89.67	331			
Social environment	Between Groups	0.40	3	0.14	1.12	0.35
	Within Groups	41.26	328	0.12		
	Total	40.68	331			

ANOVA CEE with

		Sum of Squares	df	Mean Square	F	Sig.
Self-concept	Between Groups	0.15	3	0.05	0.50	0.68
	Within Groups	33.06	328	0.10		
	Total	33.21	331			
Personal development	Between Groups	0.10	3	0.03	0.26	0.85
	Within Groups	40.58	328	0.12		
	Total	40.68	331			
Time spent	Between Groups	1.88	3	0.63	1.63	0.18
	Within Groups	126.03	328	0.38		
	Total	127.91	331			
Frequency in learning activities	Between Groups	0.39	3	0.13	1.31	0.27
	Within Groups	32.58	328	0.10		
	Total	32.97	331			
Effective learning methods	Between Groups	0.71	3	0.24	1.46	0.23
	Within Groups	53.18	328	0.16		
	Total	53.89	331			
Barriers to learning	Between Groups	0.02	3	0.01	0.04	0.99
	Within Groups	56.37	328	0.17		
	Total	56.39	331			
Reasons for entering higher education	Between Groups	2.03	3	0.68	3.68	0.01
	Within Groups	60.20	328	0.18		
	Total	62.23	331			
Choice of study programme	Between Groups	2.32	3	0.77	2.91	0.03
	Within Groups	87.35	328	0.27		
	Total	89.67	331			
Social environment	Between Groups	0.41	3	0.14	0.84	0.49
	Within Groups	53.48	328	0.16		
	Total	53.89	331			

ANOVA CEC with

		Sum of Squares	df	Mean Square	F	Sig.
Self-concept	Between Groups	0.14	3	0.05	0.45	0.72
	Within Groups	33.08	328	0.10		
	Total	33.21	331			
Personal development	Between Groups	0.41	3	0.14	1.10	0.35
	Within Groups	40.27	328	0.12		
	Total	40.68	331			
Time spent	Between Groups	0.66	3	0.22	0.56	0.64
	Within Groups	127.25	328	0.39		
	Total	127.91	331			
Frequency in learning activities	Between Groups	0.12	3	0.04	0.39	0.76
	Within Groups	32.85	328	0.10		
	Total	32.97	331			
Effective learning methods	Between Groups	0.41	3	0.14	0.84	0.47
	Within Groups	53.48	328	0.16		
	Total	53.89	331			
Barriers to learning	Between Groups	0.07	3	0.02	0.14	0.94
	Within Groups	56.32	328	0.17		
	Total	56.39	331			
Reasons for entering higher education	Between Groups	1.12	3	0.37	2.00	0.11
	Within Groups	61.11	328	0.19		
	Total	62.23	331			
Choice of study programme	Between Groups	0.58	3	0.19	0.71	0.54
	Within Groups	89.09	328	0.27		
	Total	89.67	331			
Social environment	Between Groups	1.39	3	0.46	1.73	0.15
	Within Groups	88.27	328	0.27		
	Total	89.67	331			

ANOVA CEM with

		Sum of Squares	df	Mean Square	F	Sig.
Self-concept	Between Groups	0.47	3	0.16	1.57	0.20
	Within Groups	32.74	328	0.10		
	Total	33.21	331			
Personal development	Between Groups	1.14	3	0.38	3.14	0.03
	Within Groups	39.54	328	0.12		
	Total	40.68	331			
Time spent	Between Groups	0.64	3	0.21	0.55	0.65
	Within Groups	127.27	328	0.39		
	Total	127.91	331			
Frequency in learning activities	Between Groups	0.66	3	0.22	2.23	0.08
	Within Groups	32.31	328	0.10		
	Total	32.97	331			
Effective learning methods	Between Groups	0.02	3	0.01	0.04	0.99
	Within Groups	53.87	328	0.16		
	Total	53.89	331			
Barriers to learning	Between Groups	0.37	3	0.12	0.71	0.54
	Within Groups	56.03	328	0.17		
	Total	56.39	331			
Reasons for entering higher education	Between Groups	0.08	3	0.03	0.15	0.93
	Within Groups	62.14	328	0.19		
	Total	62.23	331			
Choice of study programme	Between Groups	0.96	3	0.32	1.19	0.31
	Within Groups	88.70	328	0.27		
	Total	89.67	331			
Social environment	Between Groups	1.30	3	0.43	2.59	0.05
	Within Groups	55.09	328	0.17		
	Total	56.39	331			

ANOVA Campus Life with

		Sum of Squares	df	Mean Square	F	Sig.
Self-concept	Between Groups	1.30	2	0.65	6.68	0.00
	Within Groups	31.92	329	0.10		
	Total	33.21	331			
Personal development	Between Groups	1.58	2	0.79	6.67	0.00
	Within Groups	39.09	329	0.12		
	Total	40.68	331			
Time spent	Between Groups	0.22	2	0.11	0.29	0.75
	Within Groups	127.68	329	0.39		
	Total	127.91	331			
Frequency in learning activities	Between Groups	0.32	2	0.16	1.63	0.20
	Within Groups	32.65	329	0.10		
	Total	32.97	331			
Effective learning methods	Between Groups	0.43	2	0.21	1.32	0.27
	Within Groups	53.46	329	0.16		
	Total	53.89	331			
Barriers to learning	Between Groups	0.69	2	0.34	2.03	0.13
	Within Groups	55.71	329	0.17		
	Total	56.39	331			
Reasons for entering higher education	Between Groups	1.20	2	0.60	3.24	0.04
	Within Groups	61.02	329	0.19		
	Total	62.23	331			
Choice of study programme	Between Groups	0.14	2	0.07	0.25	0.78
	Within Groups	89.53	329	0.27		
	Total	89.67	331			
Social environment	Between Groups	0.47	3	0.16	1.57	0.21
	Within Groups	32.74	328	0.10		
	Total	33.21	331			

ANOVA Teaching with

		Sum of Squares	df	Mean Square	F	Sig.
Self-concept	Between Groups	2.10	4	0.52	5.51	0.00
	Within Groups	31.12	327	0.10		
	Total	33.21	331			
Personal development	Between Groups	2.94	4	0.74	6.38	0.00
	Within Groups	37.73	327	0.12		
	Total	40.68	331			
Time spent	Between Groups	2.32	4	0.58	1.51	0.20
	Within Groups	125.58	327	0.38		
	Total	127.91	331			
Frequency in learning activities	Between Groups	0.80	4	0.20	2.03	0.09
	Within Groups	32.17	327	0.10		
	Total	32.97	331			
Effective learning methods	Between Groups	3.25	4	0.81	5.25	0.00
	Within Groups	50.64	327	0.15		
	Total	53.89	331			
Barriers to learning	Between Groups	0.94	4	0.24	1.39	0.24
	Within Groups	55.45	327	0.17		
	Total	56.39	331			
Reasons for entering higher education	Between Groups	1.99	4	0.50	2.69	0.03
	Within Groups	60.24	327	0.18		
	Total	62.23	331			
Choice of study programme	Between Groups	2.37	4	0.59	2.22	0.07
	Within Groups	87.30	327	0.27		
	Total	89.67	331			
Social environment	Between Groups	1.99	4	0.50	2.69	0.03
	Within Groups	60.24	327	0.18		
	Total	62.23	331			

ANOVA GPA with

		Sum of Squares	df	Mean Square	F	Sig.
Self-concept	Between Groups	0.93	6	0.16	1.57	0.16
	Within Groups	32.28	325	0.10		
	Total	33.21	331			
Personal development	Between Groups	1.12	6	0.19	1.53	0.17
	Within Groups	39.56	325	0.12		
	Total	40.68	331			
Time spent	Between Groups	1.90	6	0.32	0.82	0.56
	Within Groups	126.01	325	0.39		
	Total	127.91	331			
Frequency in learning activities	Between Groups	0.98	6	0.16	1.66	0.13
	Within Groups	31.99	325	0.10		
	Total	32.97	331			
Effective learning methods	Between Groups	0.95	6	0.16	0.97	0.44
	Within Groups	52.94	325	0.16		
	Total	53.89	331			
Barriers to learning	Between Groups	0.74	6	0.12	0.72	0.63
	Within Groups	55.65	325	0.17		
	Total	56.39	331			
Reasons for entering higher education	Between Groups	1.41	6	0.24	1.26	0.28
	Within Groups	60.81	325	0.19		
	Total	62.23	331			
Choice of study programme	Between Groups	5.07	6	0.84	3.25	0.00
	Within Groups	84.60	325	0.26		
	Total	89.67	331			
Social environment	Between Groups	0.95	6	0.16	0.97	0.44
	Within Groups	52.94	325	0.16		
	Total	53.89	331			

Appendix E Interview Plan

1 Background information

1.1 Are you the first generation college student in your family?

1.2 What are your Advanced Level examination results?

1.3 Are you satisfied with the results?

1.4 What is the medium of instruction in your secondary school?
   a. Form 1 to Form 5
   b. Form 6 to Form 7

1.5 Have you joined the orientation camp (O Camp)?

   a. Yes – What do you think about that? Worthwhile?
   b. No – Why?

1.6 Are you working part-time? How many hours do you work per week? Are you paid?

2 Self-evaluation

2.1 How well do you think you are doing in your academic work? (e.g. Above average, Below average, Okay)

2.2 How satisfied are you with your academic performance? (e.g. On schedule, Ahead schedule, Behind schedule)

2.3 Are you satisfied with your relationships with your teachers and other students?

2.4 Any comments on their attitude and quality?

3 Adaptation to college

3.1 How would rate the academic demand? Do you find the course demanding? If so, how do you rate your workload?

   a. How many hours do you attend class per week?
   b. How many hours do you spend on self-study per week/day?

3.2 Have you participated in any extra curricular activities?

3.3 Based on your experience of higher education since joining this college, in what ways does it meet or differ from your expectations?

3.4 Compared with your previous learning or social experiences in your secondary school, in what ways higher education is different?

3.5 Are there something you wish you had known when you started college?

4 Learning *(skills, attributes, and qualities that the interviewee perceived himself/herself as having and as needing to develop in order to achieve "graduateness"; concerns that the interviewee might have about learning and teaching in higher education)*

4.1 How did you cope with the first few assignments which were assessed?

4.2 How did you cope with problems in your studies?

4.3 If you need help, which person would you ask?

4.4 What do you believe about your own learning? Do you think your beliefs about learning and/or your learning methods **have changed** after you have attended college for a year and, if so, in what ways? e.g. learning attitude; study approach, or …..

4.5 What factors affect your learning in your study programme and in what ways?

5 Perceived support

5.1 Does your family support you in attending college? What support would you like from your family?

5.2 What would you say are your needs as a learner in your college study? In what ways do you think your needs have been met or not?

5.3 What support would you like to receive from your college?

6 College success

6.1 In your opinion, what are the benefits of obtaining university education?

6.2 What do you expect to achieve in your university education?

6.3 What is your ideal university education?

6.4 Do you know City University of Hong Kong (CityU) has identified a number of attributes for its ideal graduates? What is your view on the list?

(If the interviewee is not aware of the ideal graduate attributes, I will show him/her the list.)

6.5 What skills, attributes and qualities that you perceive yourself as having and as needing to develop in order to become an ideal graduate of CityU?

6.6 What are the factors and processes that might assist you in developing these skills and qualities? e.g. the locus of control over the development --- oneself, teaching staff or institution?)

6.7 What does success in college mean to you?

- Academic (get a degree? learn subject knowledge? …)
- Vocational (prepare for a profession? future earnings?...)
- Personal/intellectual development (learn transferable skills?..)
- Social (make friends/establish social networks?...)

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